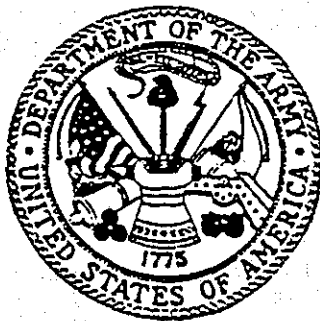
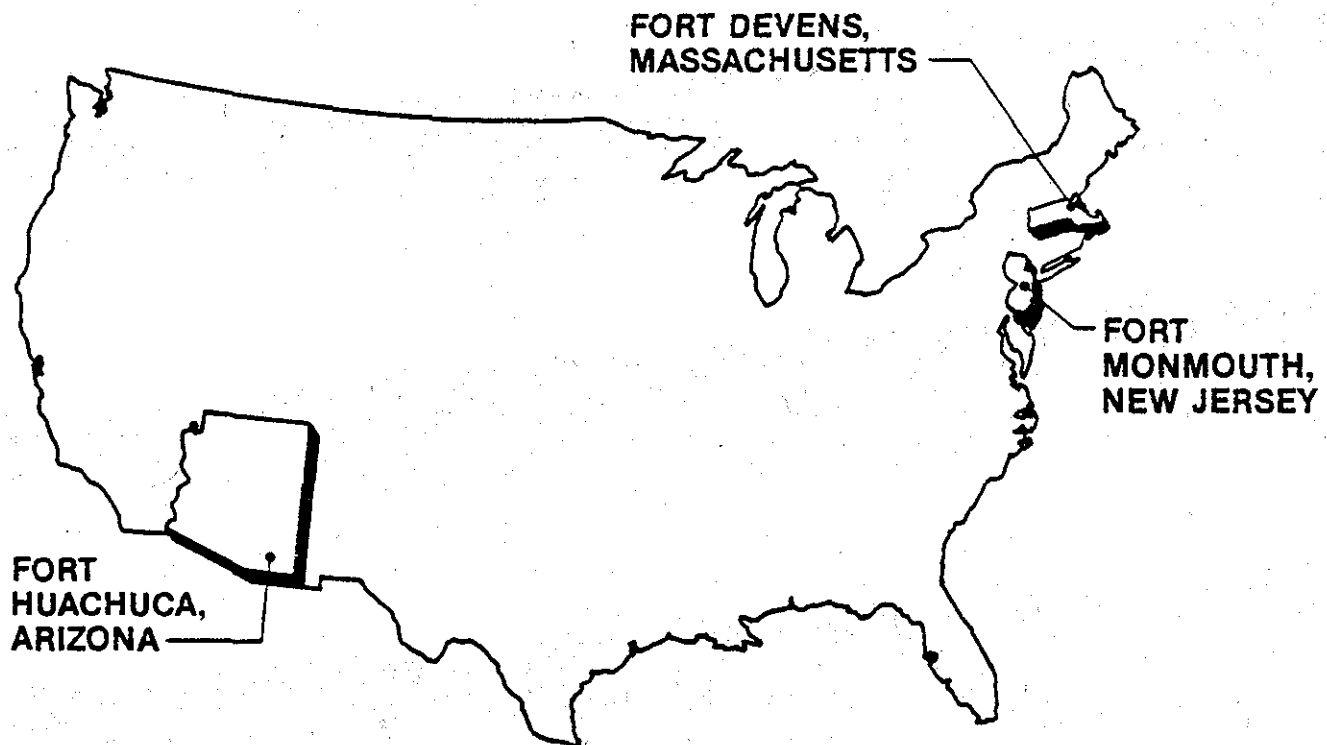


S. BROWN
IAD

FT. HUACHUCA, FT. DEVENS, FT. MONMOUTH BASE REALIGNMENT

FINAL ENVIRONMENTAL IMPACT STATEMENT



JUNE 1990

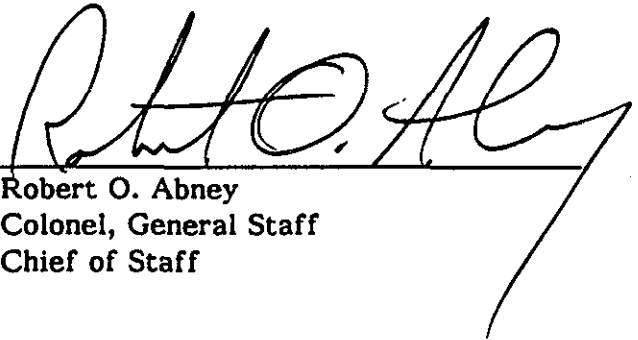
FINAL
ENVIRONMENTAL IMPACT STATEMENT
FOR
THE REALIGNMENT OF
FORTS HUACHUCA, DEVENS, AND MONMOUTH

Prepared by:
Los Angeles District
U.S. Army Corps of Engineers

Reviewed by:
U.S. Army
Information Systems Command

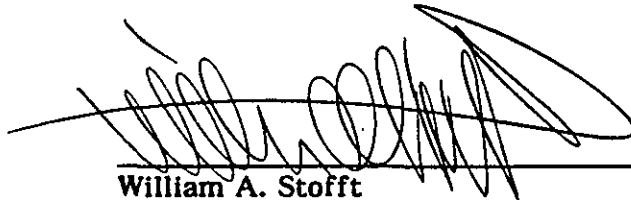


Charles S. Thomas
Colonel, Corps of Engineers
Commander



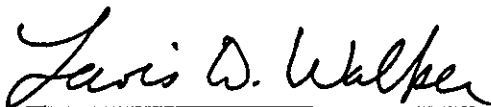
Robert O. Abney
Colonel, General Staff
Chief of Staff

Recommended for Approval by:
Department of the Army
Office of the Chief of Staff



William A. Stofft
Brigadier General, General Staff
Director of Management

Approved by:
Office of the Secretary of the Army



Lewis D. Walker
Deputy Assistant Secretary of the Army
(Environment, Safety and Occupational Health)

**FINAL ENVIRONMENTAL IMPACT STATEMENT
FORT HUACHUCA, FORT DEVENS, FORT MONMOUTH
BASE REALIGNMENT**

LEAD AGENCY: Department of the Army, Information Systems Command

TITLE OF THE PROPOSED ACTION: Fort Huachuca, Fort Devens, Fort Monmouth
Base Realignment

AFFECTED JURISDICTION: Fort Huachuca, Cochise County, Arizona; Fort Devens, Worcester and Middlesex Counties, Massachusetts; and Fort Monmouth, Monmouth County, New Jersey

PREPARER: Charles S. Thomas, Colonel, Corps of Engineers, Commander, U.S. Army Corps of Engineers, Los Angeles District

REVIEWED BY: Robert O. Abney, Colonel, General Staff, Chief of Staff, U.S. Army Information Systems Command

RECOMMENDED APPROVAL: William A. Stofft, Brigadier General, General Staff, Director of Management, Office of the Chief of Staff, Department of the Army

APPROVED BY: Lewis D. Walker, Deputy Assistant Secretary of the Army (Environment, Safety, and Occupational Health)

ABSTRACT: This document focuses upon the environmental impacts associated with the planned base realignment activities at Fort Huachuca, Arizona; Fort Devens, Massachusetts; and Fort Monmouth, New Jersey consistent with the recommendations of the Defense Secretary's Commission on Base Realignment and Closures (BRAC) and the mandate of Public Law 100-526 to efficiently consolidate Major Army Command (MACOM) and training functions within these installations. This document considers those realignment actions recommended in the Report of the Defense Secretary's Commission and implementation alternatives, and their effects. Additional actions may affect the numbers of positions transferred and impacts projected in this document. No long-term adverse environmental effects at these installations are expected as a result of realignment implementation; because the identified impacts to biological resources, endangered species, and cultural resources will be avoided or mitigated. Significant adverse socioeconomic effects could be expected in the local communities associated with Fort Huachuca. Socioeconomic impacts at Fort Devens are anticipated to be beneficial due to the transfer of higher paying civilian positions to the area. There will be adverse economic impacts to the area surrounding Fort Monmouth; however, they are not considered significant since the strong economic base of the area can absorb this impact of loss of a relatively small number of personnel positions.

Public comments may be provided to Ron Ganzfried at the Corps of Engineers, Los Angeles District (ATTN: CESPL-PD-RQ), P.O. Box 2711, Los Angeles, CA 90053-2325 or by telephone at (213) 894-6079 and must be received by July 29, 1990.

FINAL ENVIRONMENTAL IMPACT STATEMENT
FOR THE
FORT HUACHUCA, FORT DEVENS, FORT MONMOUTH
BASE REALIGNMENT

Prepared by
Department of the Army
Corps of Engineers
Los Angeles District
and
New England Division

JUNE 1990

**FINAL ENVIRONMENTAL IMPACT STATEMENT
FOR THE REALIGNMENT OF
FORTS HUACHUCA, DEVENS AND MONMOUTH**

SUMMARY

Introduction. The Secretary of Defense established the Base Realignment and Closure Commission on May 3, 1988, to recommend realignment and closure of military installations within the United States, its commonwealths, territories and possessions. The Defense Authorization Amendments and Base Closure and Realignment Act, (Public Law 100-526), dated October 24, 1988, authorized such realignments and closures. The Commission presented its specific recommendations to the Secretary of Defense on December 29, 1988.

The Commission recommended the consolidation of the U.S. Army Intelligence School, Fort Devens, Massachusetts with the Headquarters, U.S. Army Intelligence Center and School at Fort Huachuca, Arizona. The Commission also recommended the relocation of the U.S. Army Information Systems Command from Fort Huachuca to Fort Devens. Elements of this Command would also transfer to Fort Devens from Fort Monmouth, New Jersey and Fort Belvoir, Virginia. Impacts associated with realignment activities at Fort Belvoir are being addressed in a separate Environmental Impact Statement.

The realignment involves the transfer of personnel positions/authorizations and equipment between the installations. Primarily military positions and some civilian positions would be transferred from Fort Devens to Fort Huachuca. Primarily civilian positions and some military personnel positions would be transferred from Fort Huachuca to Fort Devens. Some military and civilian personnel would be transferred from Fort Monmouth and Fort Belvoir to Fort Devens. Major results of this realignment would be an increase in military positions and a decrease in civilian positions at Fort Huachuca and a decrease in military positions and an increase in civilian positions at Fort Devens. There would be a reduction of both military and civilian positions at Fort Monmouth.

In addition to the realignment of personnel positions, this action requires the renovation of present facilities and the construction of new facilities at Forts Huachuca and Devens. Table S-1 provides a summary of this anticipated construction activity.

Table S-1

PLANNED CONSTRUCTION

Installation	Project	Approximate Size (sq ft)
FORT HUACHUCA	Outdoor Sports Complex	1,500,000
	Enlisted Dining Facilities	28,000
	Physical Fitness Center	25,000
	Enlisted Club	10,000
	CMET I; Convert Existing Facility	* 41,000
	CMET II; Construct Academic Facility	42,000
	Laundry Expansion	* 11,000
	NCO Academy	24,000
	Utilities and Road Upgrades	NA
	MCD/EWCS Training Building	148,000
	TTD Training Building and TTA Training Area (82,000 sq yds)	72,000
	Maintenance Facility	34,000
	Student Issue Facility	10,000
	Dental Clinic	15,000
	Greely Hall Renovation	* 261,000
	Enlisted Barracks	375,000
	Branch Exchange	3,300
FORT DEVENS	Information Systems Building	60,000
	Headquarters Building Annex	95,000
	Renovate Building P-2602	* 91,500
	Renovate Buildings P-12 and P-13	* 109,000 * 110,000
	New Parking Facilities	54,000
	Renovate Buildings P-3412 and P-3413	* 18,600 * 65,000
	Renovate Buildings 647 648 655	* 43,000 * 43,000 * 41,700
	Underground Electrical Distribution System	NA
* Planned renovation would occur within existing building areas which are shown here. Note: This table reflects best available information as of April 26, 1990.		

During the review and finalization of this EIS, several issues were identified that needed additional clarification and analysis. This additional information is provided in this Final EIS. Major areas of changes included:

- o Remodeling of the socioeconomic impacts in Section 4.3 and associated text revisions to better reflect the socioeconomic patterns of student trainees. This reanalysis resulted in the projection of greater impacts than previously identified to the owner-occupied housing and schools at Fort Huachuca. Results of the reanalyses are included in Appendix C.
- o Provision of additional analysis on biological impacts (Section 4.2.1) associated with training activities on the ranges at Fort Huachuca.
- o Provision of additional hazardous waste and toxic material data for Fort Devens in Sections 3.8 and 4.8.
- o Additional information on range use at Fort Huachuca is provided in Section 3.3.
- o Section 5 has been expanded to include responses to comments received concerning the Draft EIS and those provided at the public hearings held during the Draft EIS public comment period. Copies of these comments and transcripts of the hearings are included in an expanded Appendix B.
- o Appendix C incorporates the Socioeconomic Effects Analysis (SEA) reports for each installation prepared by the Institute for Water Resources.
- o Appendix D includes the Programmatic Agreement (PA) between the Department of Army, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers. This PA places the Army programmatically in compliance with Section 106 of the National Historic Preservation Act for Base realignment and closure (BRAC) actions. Fort Huachuca, Fort Devens, and Fort Monmouth, where applicable, will establish management plans to comply with the provisions of this PA prior to the movement of realigning elements.

Major Conclusions and Findings. No long-term significant impacts to the biological and physical environment are anticipated as a result of construction of facilities at Fort Huachuca and Fort Devens. Increased use of existing range at Ft. Huachuca will not cause significant impact to biological resources. It has been determined, through coordination with the U.S. Fish and Wildlife Service (USFWS), that formal consultation is not required for the realignment action pursuant to Section 7 of the Endangered Species Act (ESA). Fort Huachuca will supplement an ongoing ESA compliance program for existing operations, independent of the realignment action, concerning the Federally-listed endangered Sanborn's long-nosed bat. This program will include basewide surveys of the species, its roosting areas and habitat, a biological assessment, and preparation of a basewide endangered species management plan which will identify avoidance and mitigation measures as necessary.

Construction will not affect the Historic District at Fort Huachuca. Realignment of personnel positions at Fort Huachuca may create significant adverse economic impacts to the areas surrounding the installation due to the transfer of higher paid primarily civilian positions and the replacement with lower paying primarily military positions. Significant adverse impacts to the area housing market are projected.

Socioeconomic impacts at Fort Devens are anticipated to be beneficial due to the transfer of higher paying civilian positions to the area. There will be adverse economic impacts to the area surrounding Fort Monmouth. These impacts are not considered significant since the strong economic base of the area can absorb this impact of loss of a relatively small number of personnel.

Areas of Controversy and Unresolved Issues. The primary concern at Fort Huachuca centers around the economic and social impacts associated with expected reduction/loss of civilian positions at the installation and addition of military positions. The realignment may adversely affect local and regional economics, employment, public finance, public schools, and property values. The significant economic impacts are an issue unresolved in the public's view.

The major concerns at Fort Devens involve potential socioeconomic impacts, impacts to schools, removal of hazardous materials, and potential impacts to historic resources. For the most part, these issues have been resolved. No unresolved issues at Fort Monmouth are known presently.

Relationship of Proposed Action to Environmental Requirements. Table S-2 indicates the level of compliance with Federal environmental acts and executive orders at the present state of planning. Areas of partial compliance are being addressed through ongoing consultation with appropriate agencies and persons; while such compliance is complete at this stage of planning, it cannot be considered "complete" until biological and cultural resource surveys are completed at Fort Huachuca and all installations fulfill their continuing obligation to perform required agency coordination and execute agreements as necessary before implementation of new missions and training functions associated with the realignment.

Summary of Commitments. Table S-3 presents a summary of commitments described in the FEIS. All of the installations involved in the proposed realignment action are responsible for compliance with the environmental regulations shown in Table S-2 and associated agency coordination. Also, the installations' construction and/or demolition plans and specifications will include measures to avoid or mitigate for adverse impacts during implementation and provide for protection of environmental resources and the public health and safety.

Table S-2

**COMPLIANCE WITH ENVIRONMENTAL STATUTES
FOR THE PROPOSED ACTION**

Federal Policies	Compliance
ACTS	
Clean Air Act, as amended	Complete
Clean Water Act of 1977, as amended	Complete
Comprehensive Environmental Response, Compensation, and Liability Act	Ongoing
Endangered Species Act of 1973, as amended	Ongoing
National Environmental Policy Act of 1969, as amended	Ongoing
National Historic Preservation Act of 1966, as amended	Ongoing
Resource Conservation and Recovery Act	Ongoing
EXECUTIVE ORDERS	
Floodplain Management (E.O. 11988)	Complete
Protection of Wetlands (E.O. 11990)	Complete
<p>Note: Ongoing = some requirements of the regulations remain to be met by subsequent installation actions before implementation of new missions and training functions associated with the realignment. Complete = having met all statutory requirements for the this action.</p>	

**Table S-3
(Continued)**

SUMMARY OF COMMITMENTS

Section	Installation - Commitments
FORT HUACHUCA	
4.1 PHYSICAL ENVIRONMENT	
4.1.1.1 Air Quality	<p>The following procedures will be followed during construction:</p> <ul style="list-style-type: none"> o Careful tuning of heavy construction equipment to reduce combustion source air emissions. o Control of diesel fuel quality (low sulfur content). o Frequent watering of the construction area to limit dust emissions. o Provisions for terminating construction activities during periods of high wind conditions.
4.1.1.2 Hydrology	<p>In order to minimize potential storm runoff due to construction of facilities on undeveloped areas:</p> <ul style="list-style-type: none"> o Proper engineering design of drainage facilities will reduce the increased potential for erosion and flooding to nonsignificant levels. o Construction specifications will require that measures be taken to minimize potential erosion and flooding during construction of new facilities.
4.1.1.3 Geology	<p>Facilities and structures have been designed to withstand groundshaking associated with a 7.0 Richter magnitude earthquake.</p> <p>A detailed geotechnical study has been conducted for each construction project to determine parameters for foundation and slope design.</p>
4.2 BIOLOGICAL ENVIRONMENT	
4.2.1.1 Vegetation	<p>For the most part, activities will remain on paved roads or in previously disturbed areas, avoiding impact to previously undisturbed vegetation, including sensitive habitat such as agave stands, freshwater marshes or riparian woodlands. To ensure avoidance of all vegetation resources not previously impacted or disturbed by Intelligence School activity, the installation will periodically monitor training areas as increased training associated with the realignment is implemented. Any proposed use of new areas would require additional environmental studies prior to implementation. Evidence of impact to previously undisturbed areas will require mitigation in the form of on-post set-asides or enhancement of disturbed or impacted areas. Full use of previously disturbed areas will be made before new areas of use are proposed.</p>
4.2.1.2 Wildlife	<p>Potential impacts to wildlife resources will be mitigated to nonsignificant levels through restriction of operations to previously disturbed areas. Additionally, areas already in use will be monitored by the installation to assure that no significant impacts to wildlife resources will occur from increased use in existing areas. Additional measures, such as avoidance of particular areas during nesting season or curtailment of specific activities in specific areas, will be implemented if monitoring shows an effect on the behavior of sensitive wildlife. Any proposed use of new habitat areas would require additional environmental studies prior to implementation.</p>

**Table S-3
(Continued)**

SUMMARY OF COMMITMENTS

Section	Installation - Commitments
4.2.1.3 Threatened and Endangered Species	<p>After informal consultation with the U.S. Fish and Wildlife Service, the Army has determined that the realignment action will have no effect on the Federally listed endangered Sanborn's long-nosed bat. However, as a part of the Army's existing operations and ongoing commitment to the management of natural resources on installation lands, Fort Huachuca will perform basewide surveys of the Sanborn's long-nosed bat to locate roosting habitat and agave concentrations that provide feeding habitat for the species. Additionally, surveys may attempt to identify potential impact of electronic equipment from all operations at Fort Huachuca on the bat's echolocation mechanisms. Independent of the realignment, the installation will prepare a biological assessment of existing activities and depending on the results of such assessment, may enter into Section 7 consultation with the Fish and Wildlife Service. Pending the results of consultation, Fort Huachuca will implement avoidance or mitigation measures, as required. Such measures may include, but will not necessarily be limited to: fencing of roosting habitat to avoid direct disturbance by individuals; seasonal avoidance of large stands of agave when the species is present, conservation of large areas containing agave, and avoidance of large stands by permanent relocation, or other modification of range operations at the installation. Fort Huachuca will implement a long-range installation-wide management plan for the species to ensure ongoing compliance with the Endangered Species Act.</p>
4.3 SOCIOECONOMIC ENVIRONMENT	
4.3.1.3 Changes in Economic Trends	<p>Monitoring of regional economic conditions is recommended in order to track the effectiveness of mitigations implemented by local interests and the validity of the socioeconomic modeling to-date. Resultant information would be useful to community decision makers and business persons concerning strategies to reduce economic dependency on Fort Huachuca and otherwise assist in mitigating the expected adverse impacts.</p> <p>Mitigations will consist of facilitating provision of realignment construction contracts to local firms and will center around notification of potential contracts being awarded. For some of the large contracts, the Corps of Engineers will require that a successful bidder have a subcontracting plan that shows the subcontracts let to small and disadvantaged small businesses. A contractor's awareness program will be established to brief contractors on upcoming projects and describe both prime and subcontracting opportunities. To assure maximum participation of local contractors, the Corps will conduct a conference for contractors, suppliers, and others in construction-related enterprises. Additionally, lists will be available locally so that prospective subcontractors will have information on potential prime contractors that they can contact.</p>
4.3.1.4 Real Estate and Property Values	<p>The overall net effect of the realignment action will be a small reduction in the demand for rental housing and a substantial decrease in demand for owner-occupied housing. The major mitigation associated with this housing impact is a detailed monitoring on sales and property values during the next four years of implementation of the realignment activity. If a substantial decline is noted, there will be an initiation of a Homeowners Assistance Program (HAP) for military and civilian employees.</p>

Table S-3
(Continued)

SUMMARY OF COMMITMENTS

Section	Installation - Commitments
4.3.1.5 Schools	The greatest impact will be to off-post schools serving primarily Sierra Vista. This impact is considered significant and may affect the local high school's ability to meet bonding obligations and will also result in the loss of revenues to elementary schools due to the loss of Public Law 81-874 funds from students whose parents currently work at Fort Huachuca. Mitigation is limited; however this impact can be partially reduced through establishment of early dialogue with the school district officials to reduce the overall effect of this enrollment decline by careful planning.
4.4 Cultural Resources	<p>In the event that subsurface construction reveals previously undetected cultural resources, all work should cease and a qualified archaeologist should examine newly revealed materials to assess potential significance. Construction will not affect the Historic District on-post. Areas not yet surveyed will be surveyed prior to construction as appropriate. Any resources found will be evaluated as to their eligibility for National Register Status. Sites will either be avoided or the required testing and evaluation procedures will be conducted pursuant to Section 106 of the National Historic Preservation Act of 1966 (NHPA) as amended.</p> <p>Increased use of ranges at Fort Huachuca will have the potential to impact known or unknown National Register eligible sites. All new areas proposed for use by the Intelligence School will be surveyed for cultural resources. Any resources found during the surveys will be evaluated as to eligibility for the National Register. All requirements of the Section 106 process will be complied with, in coordination with the Arizona State Historic Preservation Office. Consistent with the Army's Programmatic Agreement for cultural resources (Appendix D), the installation will develop a Memorandum of Agreement with the SHPO for retrieval, treatment, and mitigation for impacts to cultural resources.</p>
4.5 Noise	No mitigation is required; however, the Army should continue to have the USAEHA conduct environmental noise assessments and update noise contours as required by Army regulations (AR 200-1).
4.6 Traffic	Activities during construction and after realignment is completed will increase traffic on the post while decreasing peak traffic in and out of the installation. Planned modifications to the installation roadways will reduce any potentially significant impact to adverse but not significant levels.
4.7 Aesthetics and Recreation	The Fort will make use of landscaping and visual design techniques to enhance the aesthetic quality of the new facilities in the Cantonment area, Outdoor Sports Complex, and Physical Fitness Center/Gymnasium.
4.8 Hazardous or Toxic Materials	Provided the procedures identified in the Hazardous Waste Management Survey (USAEHA, 1988) are followed, no significant impacts from hazardous or toxic materials are anticipated.
4.9 UTILITIES AND PUBLIC SERVICES	
4.9.1.1 Water Supply	As standard conservation measures, water conserving faucets and shower heads should be used for new construction and renovation projects.
4.9.1.2 Wastewater Facilities	Due to future anticipated growth, engineering analysis should be conducted to insure that wastewater treatment capacity will be adequate for future demand. Additional sewer lines for new facilities are included as part of the utilities/roadway upgrade. Sewage treatment facilities both on- and off-base will continue to be monitored for potentially harmful contamination to soils and groundwater.

Table S-3
(Continued)

SUMMARY OF COMMITMENTS

Section	Installation - Commitments
4.9.1.3 Natural Gas and Electricity	Energy-efficient heating and cooling systems, proper building insulation, regulation of heater and air conditioning thermostats, turning lights off when not in use, and use of energy efficient lighting will be incorporated as conservation measures in the design of new facilities.
4.9.1.4 Solid Waste Disposal	A program of trash separation and recycling will be implemented to reduce waste materials disposed of at the landfill.
4.9.1.5 Public Services and Safety	All training activities should include safety instruction and require CPR and first aid training. The joint program with the U.S. Forest Service for mutual fire assistance should continue. Additional use of ranges could increase the potential for wildland fires due to additional personnel in the area. This potential significant impact can be reduced to nonsignificant levels through continued use of fire prevention programs.
FORT DEVENS	
4.4.2 Cultural Resources	Modifications to the exteriors of buildings or to the landscape may affect the setting or character of the district. Modification plans will be reviewed by and coordinated with the Massachusetts State Historic Preservation Office (MASHPO) in accordance with Section 106 of The National Historic Preservation Act of 1966, (NHPA), as amended.
4.8 Hazardous/Toxic Materials	Construction related efforts of hazardous materials handling are restricted to the location of the new Information Systems Facility and quadrangle in the 2600 area. World War II era buildings existing in the area must be demolished to accomplish these alterations. Prior to the demolition asbestos would be removed and disposed of in compliance with state and federal regulations. Underground storage tanks associated with these buildings must also be removed in compliance with the Resource Conservation Recovery Act and applicable state regulations. Sampling must be performed at existing and the new construction sites. If contamination is found it must be removed during the construction process.
3.8.2.6 Contaminated Sites	EPA has recorded forty-six potential hazardous waste sites on Fort Devens including: the 15-acre Explosive Ordnance Disposal (EOD) range (on the South Post), where explosives and unusable munitions have been detonated or burned in open unlined pits since 1979; the 50-acre sanitary landfill (in the North Post), where household wastes, military refuse, asbestos, construction debris, waste oil, and incinerator ash have been dumped since the 1930s; and Building 1650, where battery acids, PCBs, pesticides, and solvents have been stored. Contamination on these sites will be addressed according to procedures set forth in the Installation Restoration Program (IRP) Plan for Fort Devens prepared by USATHAMA (1989). The EPA Superfund Section overviews this entire process under an Interagency Agreement. Remedial Action, if warranted, is scheduled to begin in early 1993 (USATHAMA, 1989).

**Table S-3
(Continued)**

SUMMARY OF COMMITMENTS

Section	Installation - Commitments
FORT MONMOUTH	
4.4.3 Cultural Resources	Any plans for external modifications to Squire Hall or the surrounding grounds will be coordinated with the New Jersey State Historic Preservation Officer (NJSHPO).
4.8.3 Hazardous/Toxic Materials	Installation assessments conducted in 1980 and 1988 indicate that landfills on-base have minimal effects to ground and surface waters in the area, but recommend continued monitoring.

TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
SUMMARY	S-1
Table of Contents	i
List of Figures	viii
List of Tables	ix
List of Appendices	x
 SECTION 1 - PURPOSE AND NEED FOR THE ACTION	 1
1.1 PURPOSE AND NEED	1
1.2 PUBLIC SCOPING	1
 SECTION 2 - ALTERNATIVES CONSIDERED	 3
2.1 INTRODUCTION	3
2.2 DESCRIPTION OF THE PROPOSED ACTION	3
2.2.1 Transfer of Positions	4
2.2.1.1 Transfer of USAISC Positions to Fort Devens	4
2.2.1.2 Transfer of USAISD Positions to Fort Huachuca	4
2.2.2 Construction/Renovation of Facilities	6
2.2.2.1 Fort Huachuca	6
2.2.2.2 Fort Devens	10
2.2.2.3 Fort Monmouth	10
2.2.3 Additional Missions and Functions	10
2.2.3.1 Fort Huachuca	10
2.2.3.2 Fort Devens	13
2.2.3.3 Fort Monmouth	13
2.2.4 Effects of Proposed Action	13
2.2.4.1 Fort Huachuca	13
2.2.4.2 Fort Devens	14
2.2.4.3 Fort Monmouth	14
2.2.5 Measures to Minimize Effect of Proposed Action	14
 2.3 ALTERNATIVES TO PROPOSED ACTION	 15
2.3.1 Phasing Alternatives	15
2.3.1.1 Movement of USAISD into Interim Quarters at Fort Huachuca	 15
2.3.1.2 No New Facilities at Fort Huachuca	16

TABLE OF CONTENTS (continued)

<u>Section</u>	<u>Page</u>
2.3.2 Construction Alternatives at Fort Huachuca	17
2.3.3 Construction Alternatives at Fort Devens	17
2.3.4 Alternatives at Fort Monmouth	17
2.4 COMPARISON OF ALTERNATIVES	17
 SECTION 3 - AFFECTED ENVIRONMENT	 21
3.1 PHYSICAL ENVIRONMENT	21
3.1.1 Fort Huachuca	21
3.1.1.1 Climate and Air Quality	21
3.1.1.2 Hydrology and Water Quality	24
3.1.1.3 Geology	24
3.1.2 Fort Devens	24
3.1.2.1 Climate and Air Quality	24
3.1.2.2 Hydrology and Water Quality	26
3.1.2.3 Geology	26
3.1.3 Fort Monmouth	27
3.1.3.1 Climate and Air Quality	27
3.1.3.2 Hydrology and Water Quality	27
3.1.3.3 Geology	29
3.2 BIOLOGICAL ENVIRONMENT	29
3.2.1 Fort Huachuca	29
3.2.1.1 Vegetation	29
3.2.1.2 Wildlife	30
3.2.1.3 Fish	30
3.2.1.4 Threatened, Endangered, and Candidate Sensitive Plant and Wildlife Species	30
3.2.2 Fort Devens	33
3.2.2.1 Vegetation	33
3.2.2.2 Wildlife	37
3.2.2.3 Fish	37
3.2.2.4 Threatened, Endangered, and Candidate Sensitive Plant and Wildlife Species	38
3.2.3 Fort Monmouth	38
3.2.3.1 Vegetation	38
3.2.3.2 Wildlife	38
3.2.3.3 Fish	39
3.2.3.4 Threatened, Endangered, and Candidate Sensitive Plant and Wildlife Species	39

TABLE OF CONTENTS (continued)

<u>Section</u>	<u>Page</u>
3.3 SOCIOECONOMIC ENVIRONMENT	39
3.3.1 Fort Huachuca	39
3.3.1.1 Land Use	39
3.3.1.2 Population	47
3.3.1.3 Socioeconomic Activity	48
3.3.2 Fort Devens	53
3.3.2.1 Land Use	53
3.3.2.2 Population	54
3.3.2.3 Socioeconomic Activity	54
3.3.3 Fort Monmouth	58
3.3.3.1 Land Use	58
3.3.3.2 Population	58
3.3.3.3 Socioeconomic Activity	58
3.4 CULTURAL RESOURCES	62
3.4.1 Fort Huachuca	62
3.4.2 Fort Devens	63
3.4.3 Fort Monmouth	64
3.5 NOISE	64
3.5.1 Fort Huachuca	64
3.5.2 Fort Devens	65
3.5.3 Fort Monmouth	65
3.6 TRAFFIC AND TRANSPORTATION	65
3.6.1 Fort Huachuca	65
3.6.2 Fort Devens	66
3.6.3 Fort Monmouth	66
3.7 AESTHETICS AND RECREATION	66
3.7.1 Fort Huachuca	66
3.7.2 Fort Devens	67
3.7.3 Fort Monmouth	67

TABLE OF CONTENTS (continued)

<u>Section</u>	<u>Page</u>
3.8 HAZARDOUS MATERIALS	67
3.8.1 Fort Huachuca	67
3.8.2 Fort Devens	68
3.8.2.1 Hazardous Materials Inventory and Management	68
3.8.2.2 PCBs	69
3.8.2.3 Asbestos	70
3.8.2.4 Underground Storage Tanks	70
3.8.2.5 Oil and Hazardous Material Spill Plans	71
3.8.2.6 Contaminated Sites	71
3.8.3 Fort Monmouth	72
3.9 UTILITIES AND PUBLIC SERVICES	73
3.9.1 Fort Huachuca	73
3.9.1.1 Water Supply	73
3.9.1.2 Wastewater Facilities	73
3.9.1.3 Natural Gas and Electricity	73
3.9.1.4 Solid Waste Disposal	74
3.9.1.5 Public Services and Safety	74
3.9.2 Fort Devens	74
3.9.2.1 Water Supply	74
3.9.2.2 Wastewater Facilities	74
3.9.2.3 Natural Gas and Electricity	75
3.9.2.4 Solid Waste Disposal	75
3.9.2.5 Public Services and Safety	76
3.9.3 Fort Monmouth	76
3.9.3.1 Water Supply	76
3.9.3.2 Wastewater Facilities	76
3.9.3.3 Natural Gas and Electricity	77
3.9.3.4 Solid Waste Disposal	77
3.9.3.5 Public Services and Safety	77
SECTION 4 - ENVIRONMENTAL CONSEQUENCES	79
4.1 PHYSICAL ENVIRONMENT	79
4.1.1 Fort Huachuca	79
4.1.1.1 Air Quality	79
4.1.1.2 Hydrology and Water Quality	80
4.1.1.3 Geology	81
4.1.2 Fort Devens	82
4.1.2.1 Air Quality	82
4.1.2.2 Hydrology and Water Quality	82
4.1.2.3 Geology	83

TABLE OF CONTENTS (continued)

<u>Section</u>	<u>Page</u>
4.1.3 Fort Monmouth	83
4.1.3.1 Air Quality	83
4.1.3.2 Hydrology and Water Quality	83
4.1.3.3 Geology	84
4.2 BIOLOGICAL ENVIRONMENT	84
4.2.1 Fort Huachuca	84
4.2.1.1 Vegetation	84
4.2.1.2 Wildlife	85
4.2.1.3 Threatened and Endangered Plant and Wildlife Species	86
4.2.2 Fort Devens	88
4.2.2.1 Vegetation	88
4.2.2.2 Wildlife	89
4.2.2.3 Threatened and Endangered Plant and Wildlife Species	90
4.2.3 Fort Monmouth	90
4.3 SOCIOECONOMIC ENVIRONMENT	90
4.3.1 Fort Huachuca	91
4.3.1.1 Land Use	91
4.3.1.2 Population and Employment	96
4.3.1.3 Changes in Economic Trends	96
4.3.1.4 Real Estate and Property Values	97
4.3.1.5 Schools	98
4.3.2 Fort Devens	99
4.3.2.1 Land Use	99
4.3.2.2 Population and Employment	99
4.3.2.3 Changes in Economic Trends	100
4.3.2.4 Real Estate and Property Values	100
4.3.2.5 Schools	101
4.3.3 Fort Monmouth	102
4.3.3.1 Land Use	102
4.3.3.2 Population and Employment	102
4.3.3.3 Changes in Economic Trends	102
4.3.3.4 Real Estate and Property Values	102
4.3.3.5 Schools	103
4.4 CULTURAL RESOURCES	103
4.4.1 Fort Huachuca	103
4.4.2 Fort Devens	104
4.4.3 Fort Monmouth	105

TABLE OF CONTENTS (continued)

<u>Section</u>	<u>Page</u>
4.5 NOISE	105
4.5.1 Fort Huachuca	105
4.5.2 Fort Devens	106
4.5.3 Fort Monmouth	106
4.6 TRAFFIC	106
4.6.1 Fort Huachuca	106
4.6.2 Fort Devens	106
4.6.3 Fort Monmouth	107
4.7 AESTHETICS AND RECREATION	107
4.7.1 Fort Huachuca	107
4.7.2 Fort Devens	108
4.7.3 Fort Monmouth	108
4.8 HAZARDOUS OR TOXIC MATERIALS	108
4.8.1 Fort Huachuca	108
4.8.2 Fort Devens	108
4.8.3 Fort Monmouth	109
4.9 UTILITIES AND PUBLIC SERVICES	110
4.9.1 Fort Huachuca	110
4.9.1.1 Water Supply	110
4.9.1.2 Wastewater Facilities	110
4.9.1.3 Natural Gas and Electricity	110
4.9.1.4 Solid Waste Disposal	110
4.9.1.5 Public Services and Safety	111
4.9.2 Fort Devens	111
4.9.2.1 Water Supply	111
4.9.2.2 Wastewater Facilities	111
4.9.2.3 Natural Gas and Electricity	112
4.9.2.4 Solid Waste Disposal	112
4.9.2.5 Public Services and Safety	112
4.9.3 Fort Monmouth	113
4.9.3.1 Water Supply	113
4.9.3.2 Wastewater Facilities	113
4.9.3.3 Natural Gas and Electricity	113
4.9.3.4 Solid Waste Disposal	113
4.9.3.5 Public Services and Safety	114

TABLE OF CONTENTS (continued)

<u>Section</u>	<u>Page</u>
4.10 THE RELATIONSHIP BETWEEN SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY	114
4.11 ANY IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES WHICH WOULD BE INVOLVED IN THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED	114
SECTION 5 - PUBLIC INVOLVEMENT	115
5.1 EIS SCOPING	115
5.2 COMMENTS AND RESPONSES CONCERNING THE DRAFT EIS	118
5.2.1 Written and Telephone Comments	118
5.2.2 In-Person Comments from Public Hearing at Forts Huachuca and Devens	143
5.3 FURTHER PUBLIC INVOLVEMENT	159
SECTION 6 - LIST OF PREPARERS	161
SECTION 7 - DISTRIBUTION LIST	163
SECTION 8 - REFERENCES	167
SECTION 9 - INDEX	171

LIST OF FIGURES

<u>Number</u>		<u>Page</u>
2.2-1	Realignment Position Migration Diagram	5
2.2-2	Location of Construction Activities, Fort Huachuca	9
2.2-3	Location of Construction Activities, Fort Devens	12
3.1-1	Locations of Fort Huachuca, Fort Devens and Monmouth	22
3.1-2	Fort Huachuca Location Map	23
3.1-3	Fort Devens Location Map	25
3.1-4	Fort Monmouth Location Map	28
3.2-1	Agave Distribution in South and West Ranges-Fort Huachuca	36
3.3-1	Fort Huachuca Land Uses	40
3.3-2	Fort Huachuca Cantonment Area	41/42
3.3-3	Fort Devens Land Uses	51/52
3.3-4	Fort Devens Cantonment Area	55/56
3.3-5	Fort Monmouth Land Uses	59
3.3-6	Fort Monmouth Cantonment Area	60

LIST OF TABLES

<u>Number</u>		<u>Page</u>
S-1	Planned Construction	S-2
S-2	Compliance with Environmental Statutes for the Proposed Action	S-5
S-3	Summary of Commitments	S-6
2.2-1	Proposed Construction Projects, Fort Huachuca	7
2.2-2	Proposed Construction Projects, Fort Devens	11
2.4-1	Comparison of Impacts of Alternatives	18
3.2-1	Category 1 and 2 Candidate Sensitive Plant Species that Occur or Potentially Occur within Fort Huachuca	31
3.2-2	Threatened, Endangered, and Candidate Sensitive Wildlife Species that Occur or Potentially Occur within Fort Huachuca	34
3.3-1	Number of Military and Civilian Dependent Attending Off-Post Schools	50
4.3-1	Socioeconomic Effects at Fort Huachuca and Surrounding Area from Realignment of the Information Systems Command and Intelligence School	92
4.3-2	Socioeconomic Effects at Fort Devens and Surrounding Area from Realignment of the Information Systems Command and Intelligence School	93
4.3-3	Socioeconomic Effects at Fort Monmouth and Surrounding Area from Realignment of the Information Systems Command and Intelligence School	94
4.3-4	Annualized Economic Benefits from Construction/One-Time Expenditures During Realignment at Fort Huachuca	95
4.3-5	Annualized Economic Benefits from Construction/One-Time Expenditures During Realignment at Fort Devens	95

LIST OF APPENDICES

APPENDIX A Listing of Plant and Wildlife Species

APPENDIX B Public Involvement and Correspondence

- B-1 Correspondence Received Prior to Availability of
the DEIS**
- B-2 Correspondence Received After Availability of
the DEIS**
- B-3 Transcript of the Fort Huachuca Public Hearing**
- B-4 Transcript of the Fort Devens Public Hearing**

APPENDIX C Socioeconomic Effects Analyses Reports

APPENDIX D Programmatic Agreement

SECTION 1 - PURPOSE AND NEED FOR THE ACTION

1.1 PURPOSE AND NEED

This document focuses upon the environmental and socioeconomic impacts associated with the planned base realignment activities at Fort Huachuca, Arizona; Fort Devens, Massachusetts; and Fort Monmouth, New Jersey. On December 29, 1988, the Defense Secretary's Commission on Base Realignment and Closure (BRAC) recommended the consolidation of the U.S. Army Intelligence School, Fort Devens, Massachusetts (USAISD) with the Headquarters, U.S. Army Intelligence Center and School (USAICS) at Fort Huachuca.

The Commission also recommended the relocation of U.S. Army Information Systems Command (USAISC) activities to Fort Devens, Massachusetts. This realignment would result in the transfer of USAISC authorizations from Fort Huachuca, Arizona; Fort Monmouth, New Jersey; and Fort Belvoir, Virginia, to Fort Devens. (The Fort Belvoir transfer is being addressed in another EIS, currently in preparation.)

This realignment is planned to be completed no later than September 30, 1995. Upon completion of the proposed realignment, USAISC functions would be consolidated at Fort Devens and Intelligence School training would be consolidated at Fort Huachuca.

This realignment is intended to increase efficiencies of both organizations. The Defense Authorization Amendments and Base Closure and Realignment Act, Public Law 100-526, requires that before implementation of this proposal, the Army must consider the environmental consequences of the proposal relative to the National Environmental Policy Act (NEPA). This document has been prepared relative to Army Regulation 200-2 (32 CFR Part 651).

1.2 PUBLIC SCOPING

Public meetings were held near Fort Huachuca and Fort Devens to discuss the planned realignment actions and the concerns of persons in the affected communities in order to assist in scoping the EIS effort. Consultation and coordination with concerned agencies was initiated also. It was determined, in coordination with Fort Monmouth, that their associated realignment actions would not be significant and that public scoping meetings and hearings would not be held there; however, agency coordination has been conducted and will continue. Opportunities for continuing public involvement and comment will be

provided throughout the EIS processing. More information on public involvement and agency coordination is presented in Section 5 (Public Involvement) and Section 7 (Distribution List).

SECTION 2 - ALTERNATIVES CONSIDERED

2.1 INTRODUCTION

The Defense Authorization Amendments and Base Closure and Realignment Act (Public Law 100-526) exempted the actions of the Commission from the provisions of NEPA in its decision-making process for recommending bases to be closed or realigned. However, to implement the Commission's recommendations, environmental impact analyses required by NEPA must be performed. In carrying out these analyses, the authorizing legislation states that the Secretary of Defense shall not have to consider the following:

- o the need for closing or realigning a military installation which has been selected for closure or realignment by the Commission;
- o the need for transferring functions to another military installation which has been selected as the receiving installation; or
- o alternative military installations to those selected.

Because of the limitations that the authorizing legislation placed on the treatment of alternatives in the EIS, no alternatives to the selected installation realignments or to the training mission relocation are considered in this document. At those installations where construction will occur, installation personnel evaluated alternative sites on the installation where such existed.

2.2 DESCRIPTION OF THE PROPOSED ACTION

The proposed action involves the realignment of Fort Huachuca, Fort Devens and Fort Monmouth relative to Public Law 100-526. Specifically, this action includes:

- o Transfer of the U.S. Army Intelligence School, Fort Devens (USAISD) to Fort Huachuca and to consolidate USAISD with the U.S. Army Intelligence Center and School (USAICS) at Fort Huachuca.
- o Transfer of the U.S. Army Information Systems Command (USAISC) elements from Fort Huachuca, Fort Monmouth, and Fort Belvoir to Fort Devens. Effects of Fort Belvoir transfers are addressed in the Fort Belvoir EIS (currently in preparation).

This proposed action involves three principal components: (1) transfer of personnel positions, (2) construction of new facilities and refurbishment of existing facilities, and (3) transfer of missions and functions. The following subsections outline each of these components for all affected installations.

2.2.1 Transfer of Positions

This subsection describes the transfer of USAISC positions from Fort Huachuca, Fort Monmouth, and Fort Belvoir to Fort Devens and the transfer of USAISD positions from Fort Devens to Fort Huachuca. Figure 2.2-1 provides a summary of the transfer of positions to and from each facility. It should be noted that the numbers used in this report reflect the best information available as of January, 1990. As planning proceeds further, there is a potential that these numbers may be further revised. Therefore, the numbers used in this report should be considered approximate. Additionally, it should be noted that the proposed action involves transfers of positions. The exact number of personnel actually relocated cannot be determined at this time.

2.2.1.1 Transfer of USAISC Positions to Fort Devens

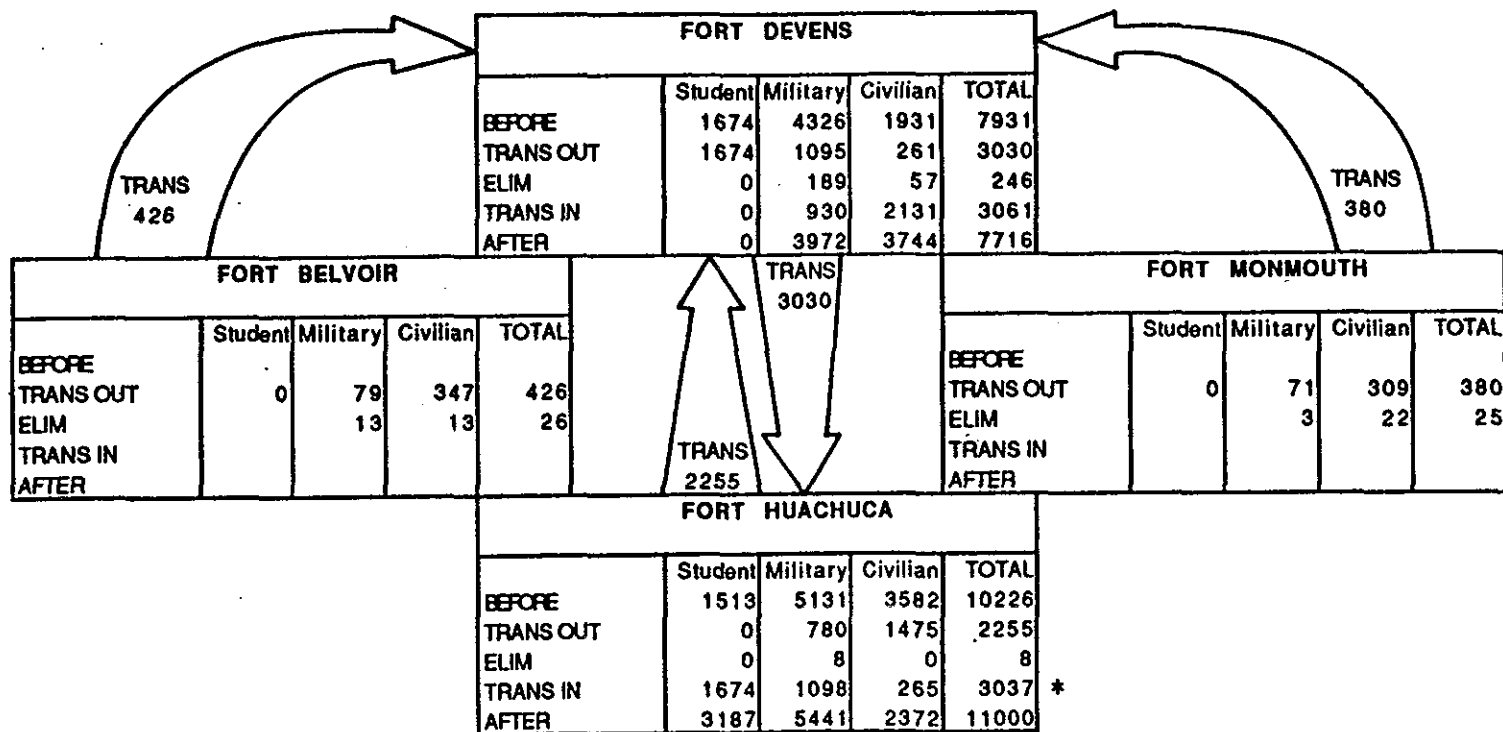
USAISC is primarily involved with management of information using the disciplines and technologies associated with automation, telecommunications, records management, visual information, and printing/publications. Its mission consists of assigned resources, activities, facilities, and services employed in the acquisition, development, transmission, use, integration, retention, retrieval, and management of information. This includes assigned responsibilities for theater/tactical, strategic, and sustaining base information systems. Most of this mission, and the positions assigned to perform the mission, will be transferred from Fort Huachuca, Fort Monmouth, and Fort Belvoir to Fort Devens.

As shown in Figure 2.2-1, a total of 2,255 USAISC positions from Fort Huachuca consisting of 780 military and 1,475 civilian positions will be transferred to Fort Devens on or before September 30, 1995. An additional eight military positions will be eliminated from Fort Huachuca as a result of the proposed action. Fort Devens will also receive 380 positions (71 military and 309 civilian) from Fort Monmouth and 426 positions (79 military and 347 civilian) from Fort Belvoir. Three military and 22 civilian positions will be eliminated from Fort Monmouth concurrent with the transfer of positions. Thirteen military and 13 civilian positions will be eliminated from Fort Belvoir. It should be noted that impacts at Fort Belvoir related to the transfer of USAISC positions are being addressed in another EIS.

It is anticipated that approximately 30 percent of the authorizations will be transferred out during Fiscal Year 1992 with the remainder transferred in phases by FY 1995. All transfers will be accomplished on or before September 30, 1995 as required by PL 100-526.

2.2.1.2 Transfer of USAISD Positions to Fort Huachuca

USAICS's mission is the training of Army and other service personnel in the general areas of intelligence, counter-intelligence, and electronic warfare. This activity involves the presentation of courses in these areas both for initial training and periodic retraining of personnel.



* This number includes three military and four civilian personnel transferred to Fort Huachuca from locations other than Fort Devens.

THIS DIAGRAM REFLECTS THE BEST AVAILABLE INFORMATION AS OF JANUARY, 1990.

REALIGNMENT POSITION MIGRATION DIAGRAM

**FIGURE
2.2-1**

Realignment of the Intelligence School from Fort Devens to Fort Huachuca involves the relocation of the Morse Collection Department (MCD), Electronic Warfare Department (EWD), Directorate of Training and Doctrine (DOTD), Maintenance Training Department (MTD), Directorate of Evaluation and Standardization (DOES), and School Secretariat.

As shown in Figure 2.2-1, 3,030 positions will be transferred from Fort Devens to Fort Huachuca. Transferees will include 1,674 students, 1,095 military, and 261 civilian positions. Additionally, 189 military and 57 civilian positions will be eliminated at Fort Devens. An additional three military and four civilian positions will also be transferred into Fort Huachuca from other locations. These seven positions are for medical staff which are not a part of this realignment.

Construction is expected to begin at both Fort Huachuca and Fort Devens in the fall of 1990 with all construction and realignment activities to be completed by the end of April, 1995. Elements of USAISD and USAISC will begin relocating during 1991 with the first USAISC elements scheduled to arrive at Fort Devens in April 1991. Training activities of USAISD will be transferred in phases from Fort Devens to Fort Huachuca during 1992 and 1993. The majority of USAISC personnel and equipment will be moved in 1994.

In order to keep training disruptions at a minimum and make optimal use of the facilities which will be vacated by the proposed realignment activities at both Fort Huachuca and Fort Devens, the transfers will be conducted in phases. It is anticipated that all training programs will be transferred to Fort Huachuca by September 30, 1995, as required by PL 100-526.

2.2.2 Construction/Renovation of Facilities

2.2.2.1 Fort Huachuca

In order to accommodate the training functions of USAICS at Fort Huachuca, substantial construction of new facilities and renovation of existing facilities will be required. Approximately 1,057,300 square feet of new construction and renovation (not including the Tactical Training Area and the Outdoor Sports Complex) totaling an estimated \$129 million are required. Approximately \$10 million of the construction is not attributable to realignment but to accommodate current missions. Table 2.2-1 briefly describes the proposed construction and renovation activities. Figure 2.2-2 delineates the locations of proposed construction activities. The renovation and new construction activities must be accomplished in discreet stages in order to reduce any delays in training while allowing USAISC to continue activities prior to transfer to Fort Devens.

Table 2.2-1

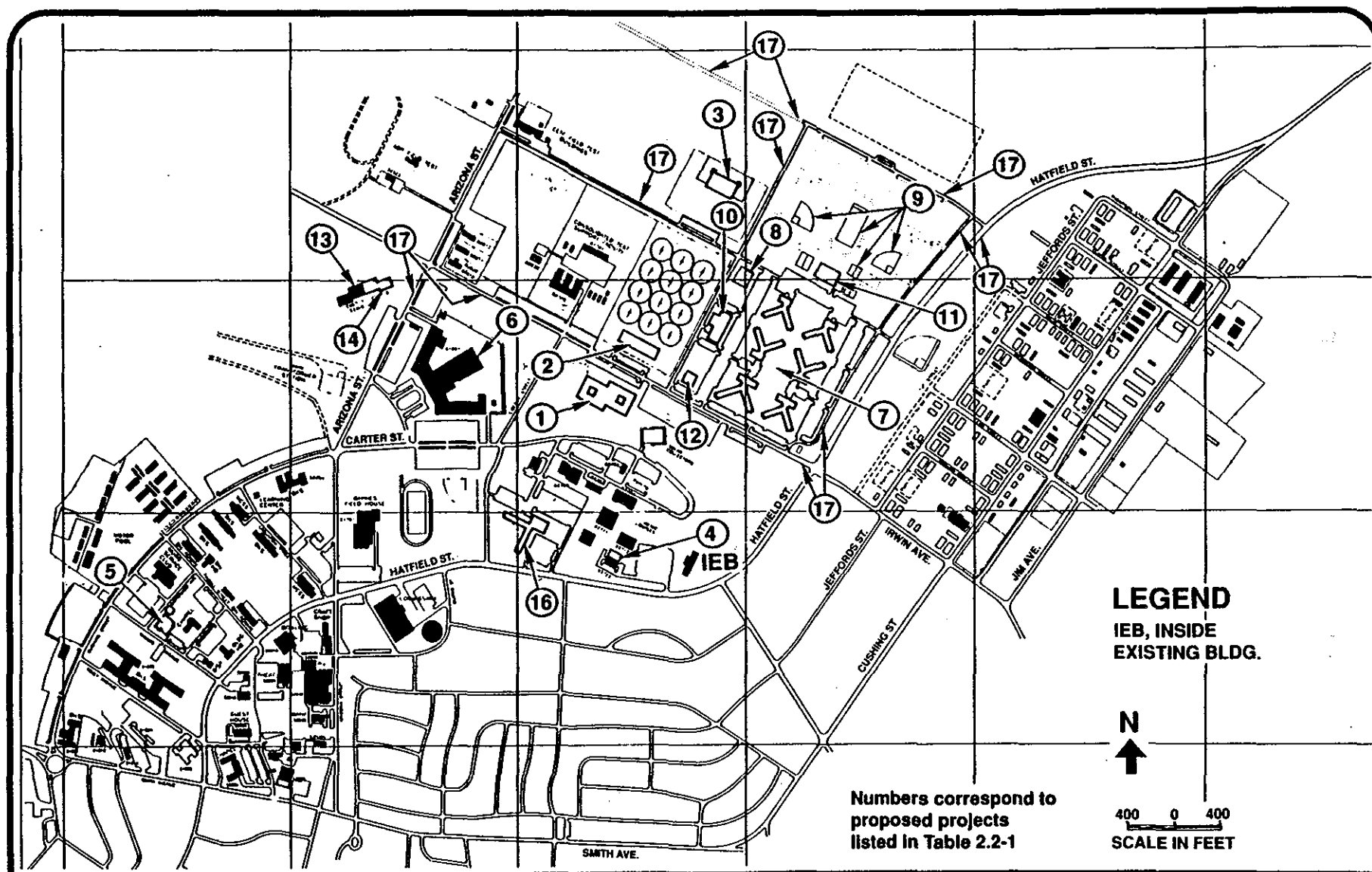
PROPOSED CONSTRUCTION PROJECTS, FORT HUACHUCA

Facility No. (see Figure 2.2-2)	Facility	Description	Locations	Approximate Size (sq ft)
1	MCD/EWCS	Construct an Applied Training Building for the Morse Collection Dept. (MCD) and Electronic Warfare, Cryptological and Security Dept. (EWCS).	South of Irwin St., north of the Academic Complex.	148,000
2	TTA/TTD	Construct an Applied Training Building and training area to support the Signal Intelligence/Electronic Warfare Tactical Training Div. (TTD) and Tactical Training Area (TTA). Relocate the Parade Field.	North of Irwin St. across from the MCD/EWCS facility.	72,000 (TTD) 82,000 (TTA: size in sq yds)
3	Maintenance Facility	Construct a Signal Intelligence/ Electronic Warfare Systems Maintenance Facility.	North of Irwin St., west of Hatfield St.	34,000
4	Student Issue/ Turn In	Construct an addition to the present Student Issue Facility.	Within the Academic Complex, Building 62723.	10,000
5	Dental Clinic	Construct a new 28-chair Dental Clinic.	North of Winans Ave., between Kino and Coronado.	15,000
6	Greely Hall Renovation	Renovate Greely Hall for use by the Basic Morse Division (BMD) and a portion of the Maintenance Training Department (MTD). Phased construction.	Building 61801, north of Cushing and east of Arizona.	261,000
7	Enlisted Barracks	Construct standard-design barracks with Company and Battalion administration areas.	Northwest corner of Irwin and Hatfield Streets.	375,000
8	Branch Exchange	Construct a standard design Branch Exchange in the Troop Area.	North of Irwin St. and west of Barracks project area.	3,300

Table 2.2-1
(Continued)

PROPOSED CONSTRUCTION PROJECTS, FORT HUACHUCA

Facility No. (see Figure 2.2-2)	Facility	Description	Locations	Approximate Size (sq ft)
9	Outdoor Sports Complex	Construct an outdoor sports complex with tennis, basketball, volleyball, and handball courts, and softball and football fields.	North of Irwin St., west of Hatfield St., north of the new barracks.	1,500,000
10	Enlisted Dining Facilities	Construct two standard-design dining facilities, each for 400-800 persons.	North of Irwin St., east of the TTA/TTD facility.	28,000
11	Physical Fitness Center	Construct a physical fitness center including gymnasium, weight room, lockers, handball courts, and offices.	Just south of the new outdoor sports complex.	25,000
12	Enlisted Club	Construct an Enlisted Club with game room, lounge, lobby, and office.	North of Irwin St., south of the new dining facilities.	10,000
13	CMET I	Convert existing facility for Directorate of Training and Doctrine, USAICS.	West of Greely Hall and Arizona St.	41,000
14	CMET II	Construct a SCIF Academic facility for Directorate of Training and Doctrine, USAICS.	West of Greely Hall and Arizona St.	42,000
15*	Laundry Expansion	Construct an addition to existing Post Laundry with upgraded boiler system.	East of Brainard Road and south of Machal Ave.	11,000
16	NCO Academy/Training	Construct an Academic Facility to support the USAICS NCO Training Requirements.	North of Hatfield St. in USAICS Academic Complex.	24,000
17	Utilities/Roads Upgrade	Construct the roadways, utility addition, and ground improvements required to support realignment activities.	Facilities will be located to support new construction and renovation projects.	NA
* not shown on Figure 2.2-2				



**LOCATION OF CONSTRUCTION ACTIVITIES.
FORT HUACHUCA**

**FIGURE
2.2-2**

2.2.2.2 Fort Devens

Transfer of USAISC to Fort Devens will require substantial upgrading of facilities. Approximately 724,800 square feet of new construction and renovation totaling an estimated \$71.4 million are required. Table 2.2-2 provides a description of each facility and Figure 2.2-3 delineates its location.

The proposed action involves the utilization of two of the four existing buildings in the Vicksburg Square (P-12 and P-13) section of Fort Devens, Building 2602 which was constructed for the Army Intelligence School, Buildings P-3412 and P-3413, and Buildings 647, 648, and 655. These buildings would be extensively renovated. Proposed new construction includes a 60,000 square-foot, one-story Information Systems Facility, and a 95,000 square-foot, two-story Headquarters Building. Demolition of as many as 21 existing World War II era buildings and appurtenant structures would be required for site improvements and for health and safety reasons (i.e., removal of underground storage tanks). Existing buildings 2618 and 2226 are in the construction footprint of the Headquarters Building and buildings 2660, 2661, and 2662 are in the footprint of the proposed Information Systems Facility.

Upgrades of water and sewer systems are not proposed. Electrical distribution system upgrades are required, as described in Table 2.2-2. Additional parking is required outside of Vicksburg Square to provide adequate parking for the ISC occupants of Buildings P-12 and P-13. Proposed locations for the approximately 54,000 square-foot parking lot are adjacent to the installation museum and near Post Headquarters. Telecommunication upgrades are in the planning stages. Total construction costs of \$71.4 million are projected at Fort Devens.

2.2.2.3 Fort Monmouth

No construction is planned at Fort Monmouth as a part of this action. All Information Systems Command elements at the installation are located at Squire Hall on the Main Post.

2.2.3 Additional Missions and Functions

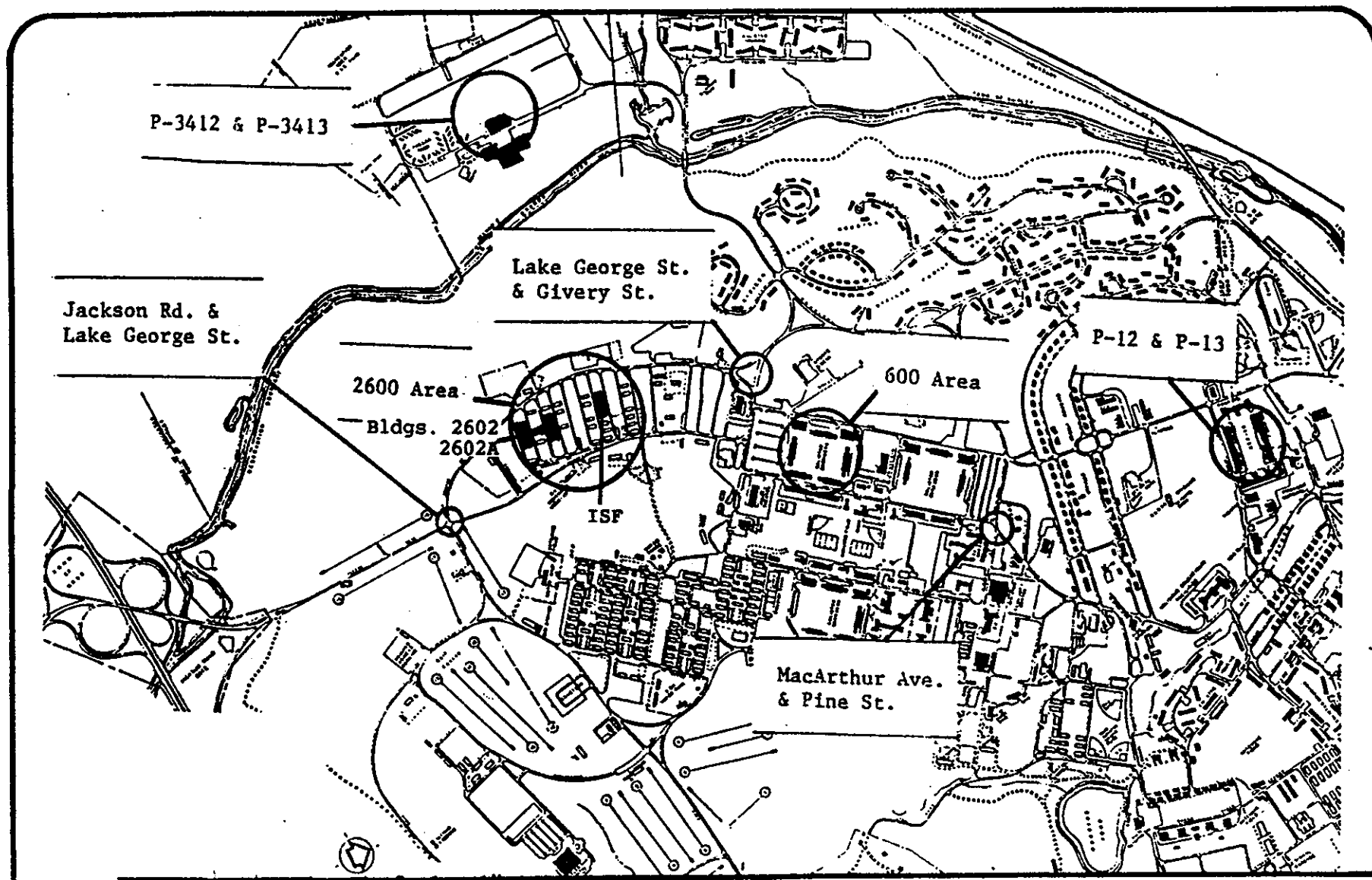
2.2.3.1 Fort Huachuca

USAICS at Fort Huachuca currently conducts 46 courses; 12 of these courses involve field training. Approximately 1,500 students are currently enrolled in courses at any one time. An additional 49 courses will be transferred from Fort Devens; five of these courses involve field training.

Table 2.2-2

PROPOSED CONSTRUCTION PROJECTS, FORT DEVENS

Facility	Description	Location	Approximate Size (sq. ft.)
Information Systems Facility (ISF)	Construct 1-story structure for Directorate of Information Management, providing for data processing, telecommunications, printing/publication, and records management functions.	Between Saint Barbara St. and Lake George St.	60,000
Headquarters Building Annex (P-2602A)	Construct 2-story structure for administrative and miscellaneous support functions for ISC headquarters staff.	Between Saint Barbara St. and Lake George St. adjacent to the Information Systems Facility.	95,000
Building P-2602	Renovate the interior of existing structure for service as ISC headquarters building, with operations, administrative, and security information functions.	Between Saint Barbara St. and Lake George St. attached to Building P2602A.	91,500
Buildings P-12, P-13	Renovate and upgrade existing structures for communications engineering and test complex; construct adjacent parking facilities	Between Buena Vista St. and Antietam at Sherman Ave.	109,000 (P-12) 110,000 (P-13) 54,000 (parking)
Buildings P-3412, P-3413	Renovate, convert, and expand existing structures for information systems and engineering complex.	Between Lovell and Gorgas Sts.	18,600 (P-3412) 65,000 (P-3413)
Buildings 647, 648, 655	Renovate and convert existing structures to provide a high security communications engineering, test, and administrative complex.	Enlisted barracks area between MacArthur Ave. and Sherman Ave.	43,000 (647) 43,000 (648) 41,700 (655)
Underground Electrical Distribution System	Extend 13.8 KV to Vicksburg Square and provide dual circuitry from substation to ISF and HQ ISC.	2600 Area Vicksburg Square	NA



LOCATION OF CONSTRUCTION ACTIVITIES,
FORT DEVENS

FIGURE
2.2-3

Most of the courses involve either classroom training or training in designated areas within the Cantonment area. Field classes outside of the Cantonment area generally involve 5 to 10 acres of land where antennae and other electronic equipment are set up. Many of these areas are within disturbed areas used on a regular basis for such activities. Off-road vehicular use associated with this activity is low. Explosives are not used as a part of this training.

The proposed realignment activities will represent a 24 percent increase in the number of persons conducting USAICS field training and a 50 percent increase in the number of days of USAICS field training at Fort Huachuca. It is not known which new areas at Fort Huachuca, if any, will be required for these activities. For the purposes of this environmental document, it is assumed that the general activity throughout the ranges will increase proportionally. Individual environmental analyses will be conducted if new operation areas are identified in the future.

Hazardous or toxic materials used by the USAICS consist of cleaning solvents (Trichloroethane, Isopropyl alcohol), automotive fluids, paints, and compressed gas cylinders. Realignment of USAISD to Fort Huachuca will add additional cleaning solvents and photographic developing chemicals. These activities do not entail the large-scale use of hazardous materials nor do they use any explosives.

2.2.3.2 Fort Devens

Most of USAISC's activities do not require range use; therefore, with the exception of physical training and small arms practice, there will not be any increase in the use of range areas. Transfer of USAISD to Fort Huachuca will not result in a substantial reduction in range use.

2.2.3.3 Fort Monmouth

No additional range use is anticipated since USAISC personnel will be transferred out.

2.2.4 Effects of Proposed Action

2.2.4.1 Fort Huachuca

Realignment of Fort Huachuca will likely result in a reduction of civilian and military personnel of the USAISC who primarily live off-post and the addition of substantially more military personnel of the USAICS including students who will live primarily on-post. Even though the number of persons employed and the regional population will increase due to the realignment, there will be a substantial reduction in wages paid since those positions transferred out are paid considerably more than those positions transferred in. The reduction in wages and direct expenditures at Fort Huachuca will result in a significant

economic impact. There will be significant impacts to the off-post owner occupied housing market due to the transfer out of civilian personnel from Fort Huachuca. Additionally, there will also be a potential significant impact to Sierra Vista primary and secondary schools due to a projected decrease in enrollment. Construction activities at Fort Huachuca are not expected to result in any significant adverse environmental impact. Increased training activities on the ranges will have the potential to significantly impact cultural and biological resources. Surveys of these areas continue to define specific impacts and mitigation in coordination with Federal (U.S. Fish and Wildlife Service) and state (State Historic Preservation Office) agencies as appropriate.

2.2.4.2 Fort Devens

Realignment activities at Fort Devens would likely result in a substantial reduction of on-post military personnel with a concurrent increase in off-post civilian personnel. There will be a substantial beneficial impact in regional employment, regional sales volume and regional income. No significant impacts to schools or housing are anticipated. No significant construction-related impacts are anticipated at Fort Devens with the exception of the potential for encountering asbestos or leaking underground tanks during demolition and excavation for construction and renovation activities. This potential hazardous condition will be remediated before and during construction. No impacts are associated with use of ranges since range activity is not expected to increase.

2.2.4.3 Fort Monmouth

Impacts at Fort Monmouth are limited to those associated with relocation of military and civilian authorizations to Fort Devens. There will be reduction of area-wide expenditures and sales resulting in an adverse, but not significant economic impact. No construction is associated directly with the realignment activities at Fort Monmouth.

2.2.5 Measures to Minimize Effects of Proposed Action

Measures to minimize the effects of the Proposed Action at Fort Huachuca include surveys for cultural and biological resources both within construction areas and within areas of the ranges used for field operations. If cultural resources or Federally listed or candidate threatened or endangered species are encountered, the post will enter into Memorandum of Agreements with such agencies as the State Historic Preservation Office and the U.S. Fish and Wildlife Service to evaluate and mitigate any significant impact. It is very difficult to mitigate significant economic impacts. A monitoring program will be used to assess the actual economic impact and emphasis will be placed on encouraging other non-military related ventures to aid the regional economy. The Office of Economic Assessment has been working with the community to find ways to mitigate this impact; it remains significant.

Measures to minimize any environmental effects at Fort Devens include surveys and remediation efforts associated with potential asbestos problems in existing buildings and underground petroleum tank leakage. No measures to minimize the environmental effects at Fort Monmouth are required.

2.3 ALTERNATIVES TO PROPOSED ACTION

The Defense Authorization Amendments and Base Closure and Realignment Act specifies that the National Environmental Policy Act (NEPA) should not apply to the actions of the Commission in recommending military installations to receive functions from an installation to be realigned, or the actions of the Secretary in determining whether to accept the recommendation. It further states that the Secretary does not have to consider the need for realigning an installation or transferring functions to another installation selected as the receiving installation, or consider alternative installations to those selected, in applying the provisions of the National Environmental Policy Act after the selection is made. The requirement in NEPA for consideration of alternative ways of implementing the proposed action remains. In the case of the proposed realignment, possible alternatives for implementation are limited. If a no action alternative were implemented, the existing baseline conditions, as described in the section on the affected environment, would continue without the impacts resulting from the proposed action described in the environmental consequences section. The no action alternative is not viable based upon the implementation of Public Law 100-526. The remaining alternatives are discussed below.

2.3.1 Phasing Alternatives

Two types of phasing alternatives are possible. Each of these actions would speed up the transfer, but would generally result in the same types and levels of environmental effects.

2.3.1.1 Movement of USAISD into Interim Quarters at Fort Huachuca

This alternative involves the interim movement of USAISD personnel into temporary quarters at Fort Huachuca, thus allowing the USAISC to begin renovations at the facilities at Fort Devens. Putting USAISD personnel into interim facilities would potentially expedite the move of USAISC personnel to Fort Devens because it would permit early renovation of vacated academic and barracks facilities at Fort Devens. (Renovation is required to meet the administrative and technical requirements of USAISC elements that are consistent with the facilities they currently occupy.) Three factors argue against this alternative: 1) an interim move of USAISD will cost close to \$7 million and be a temporary investment in portable facilities to both house and train incoming personnel; 2) while facilities are being renovated at Fort Devens, the Fort Huachuca infrastructure would be forced to accommodate a costly surge requirement to accommodate an increased population of approximately 3,000 before USAISC elements depart; and 3) the interim move of USAISD will create a need to move USAISD twice - to interim and then permanent facilities. Two moves will disrupt the training mission to the extent that insufficient throughput of trained students in critical job specialties will result.

The long-term environmental impacts of this alternative would be identical to the proposed actions since the same transfer of positions would occur between installations and the same construction and operations would occur. On a short-term basis there would be potentially significant socioeconomic impacts at Fort Huachuca and Fort Devens due to an added increase of students at Fort Huachuca and a reduction of population at Fort Devens. Interim economic mitigation may be required at both facilities.

Due to the potential impact on USAISD's training mission, as well as the additional costs and potential short-term impacts, this alternative was not considered reasonable and was rejected.

2.3.1.2 No New Facilities at Fort Huachuca

This alternative would involve the renovation of facilities at Fort Huachuca, but with no new facilities constructed. This would involve the use of portable facilities for student housing. Infrastructure improvements would be required for this alternative.

No vacant permanent academic facilities will exist to support the USAISD requirements until Greely Hall is vacated by USAISC. Once Greely Hall is vacated and renovated for academic use, a significant shortfall in academic/applied instruction facilities will still exist. Therefore, interim facilities would be required in phases. The amount of interim square footage to be used on a continuing basis would be excessive. No permanent barracks facilities exist to meet the additive USAISD requirements. Even if USAISC personnel were relocated before USAISC moves, the differing mix of USAISC personnel means the USAISD barracks space requirement will be substantially unmet without new facilities. The use of interim barracks facilities, including World War II facilities, will not meet Army Community of Excellence standards and is not an acceptable substitute for permanent facilities. Use of off-post housing, if it is available, is not acceptable for the type of training courses being conducted by USAISD because it creates a loss of unit integrity and military discipline.

Implementation of this alternative would result in the same level of impacts as the proposed action since the same realignment of positions would occur and no significant unmitigable impacts were identified with construction of facilities. It is conceivable that use of off-post housing for USAISD students would be a beneficial impact to the rental housing market in the Sierra Vista/Huachuca City area. No additional mitigation measures other than those identified for the proposed action would be required.

Since this alternative would cause severe operational constraints for USAISD and would severely impact its training mission, this alternative was considered unacceptable.

2.3.2 Construction Alternatives at Fort Huachuca

Although no specific alternatives were developed for construction of facilities at Fort Huachuca, there would be a wide spectrum of conceivable construction and design alternatives available. In general, construction of facilities within the Cantonment area and outside of the historic district would not result in significant impacts. Construction within the Historic District would result in significant impacts to cultural resources that may require extensive mitigation. Construction within the range areas would have a greater potential to create significant impacts to biological and cultural resources as well as impacting range missions and creating additional impacts associated with extension of the utility infrastructure. Significant socioeconomic impacts at Fort Huachuca would result regardless of the changes in construction. For the reasons discussed above, construction alternatives were not considered further.

2.3.3 Construction Alternatives at Fort Devens

There are several alternatives associated with various construction and renovation of facilities. These options basically involve the various methods of renovation and the extent of renovation. The principal alternative involved the location and design of building 2602A (Headquarters Building Annex). Three alternative designs were considered as well as an alternative location for the complex to the south. The design option of an "H"-shaped building with two wings was selected since it best met the requirements of the USAISC. Relocation of the facility to the south was rejected since construction would require extensive filling of the site. The implementation of the alternatives would result in the same level of impact as the Proposed Action.

2.3.4 Alternatives at Fort Monmouth

Since activities associated with realignment at Fort Monmouth involve the relocation of personnel authorizations and no construction would occur directly with this activity, no alternatives were available for Fort Monmouth activities.

2.4 COMPARISON OF ALTERNATIVES

As described above, the number of alternatives available to the Proposed Action is quite limited primarily due to the constraints placed on alternatives analysis by PL 100-526. The significant impacts of the proposed action are actually due to the realignment of positions/authorizations to the affected installations. Phasing alternatives would not change the anticipated significant socioeconomic impacts at Fort Huachuca but would also severely impact the training missions of USAISD. This impact would occur since numerous classes would either be canceled or postponed resulting in a serious impact to its training mission. Therefore, these alternatives were screened from detailed analysis. Table 2.4-1 summarizes the impacts of each alternative considered.

Table 2.4-1

COMPARISON OF IMPACTS OF ALTERNATIVES

Phasing Alternative	Environmental Effect	Environmental Commitments
Proposed Action - Construction of Facilities as proposed	FORT HUACHUCA 1. Potential significant impacts to cultural and biological resources from increased range use.	1. Field surveys of new and current areas of use and site specific mitigation.
	2. Potential significant socioeconomic impacts within Cochise County.	2. Continue economic monitoring.
	FORT DEVENS 3. Potential construction-related impacts associated with leaking fuel tanks and asbestos.	3. Surveys and remediation if required.
	FORT MONMOUTH 4. Potential adverse but not significant economic impacts.	4. None required.
Movement into Interim Quarters at Fort Huachuca	FORT HUACHUCA 1. Impacts similar to proposed action. Would result in severe impact to Intelligence School Training mission.	1. Same as proposed action.
	FORT DEVENS 2. Short-term economic impact due to early transfer of Intelligence School positions.	2. None required.
	FORT MONMOUTH 3. No effect.	3. None required.
No New Facilities at Fort Huachuca	FORT HUACHUCA 1. Slight reduction in non-significant construction impacts. Severe impact to Intelligence School training mission.	1. Same as proposed action.
	FORT DEVENS 2. No effect.	2. Same as proposed action.
	FORT MONMOUTH 3. No effect.	3. Same as proposed action.

Table 2.4-1

COMPARISON OF IMPACTS OF ALTERNATIVES

Phasing Alternative	Environmental Effect	Environmental Commitments
Construction Alternatives at Fort Huachuca	1. Generally same as proposed action, with Cantonment area and not in Historic District. Other forts not affected.	1. Same as proposed action.
Construction Alternatives at Fort Devens	1. Generally same as proposed action. Other forts not affected.	1. Same as proposed action.
Construction Alternatives at Fort Monmouth	No construction proposed.	

This page intentionally left blank

SECTION 3 - AFFECTED ENVIRONMENT

3.1 PHYSICAL ENVIRONMENT

3.1.1 Fort Huachuca

Fort Huachuca is located in Cochise County in southeast Arizona. The Fort is comprised of 73,344 acres and is situated in a generally rural area along the foothills and north plateau of the Huachuca Mountains at elevations of 3,900 to 8,700 feet above mean sea level. The U.S.-Mexican border is approximately eight miles from the southern boundary of the military reservation and Tucson, Arizona is 58 miles northwest of the base. Interstate 10 is approximately 35 miles north of the reservation with access to the Fort provided by State Highway 90. Sierra Vista, located near the main gate, and Huachuca City, near the north gate, are the closest communities to Fort Huachuca.

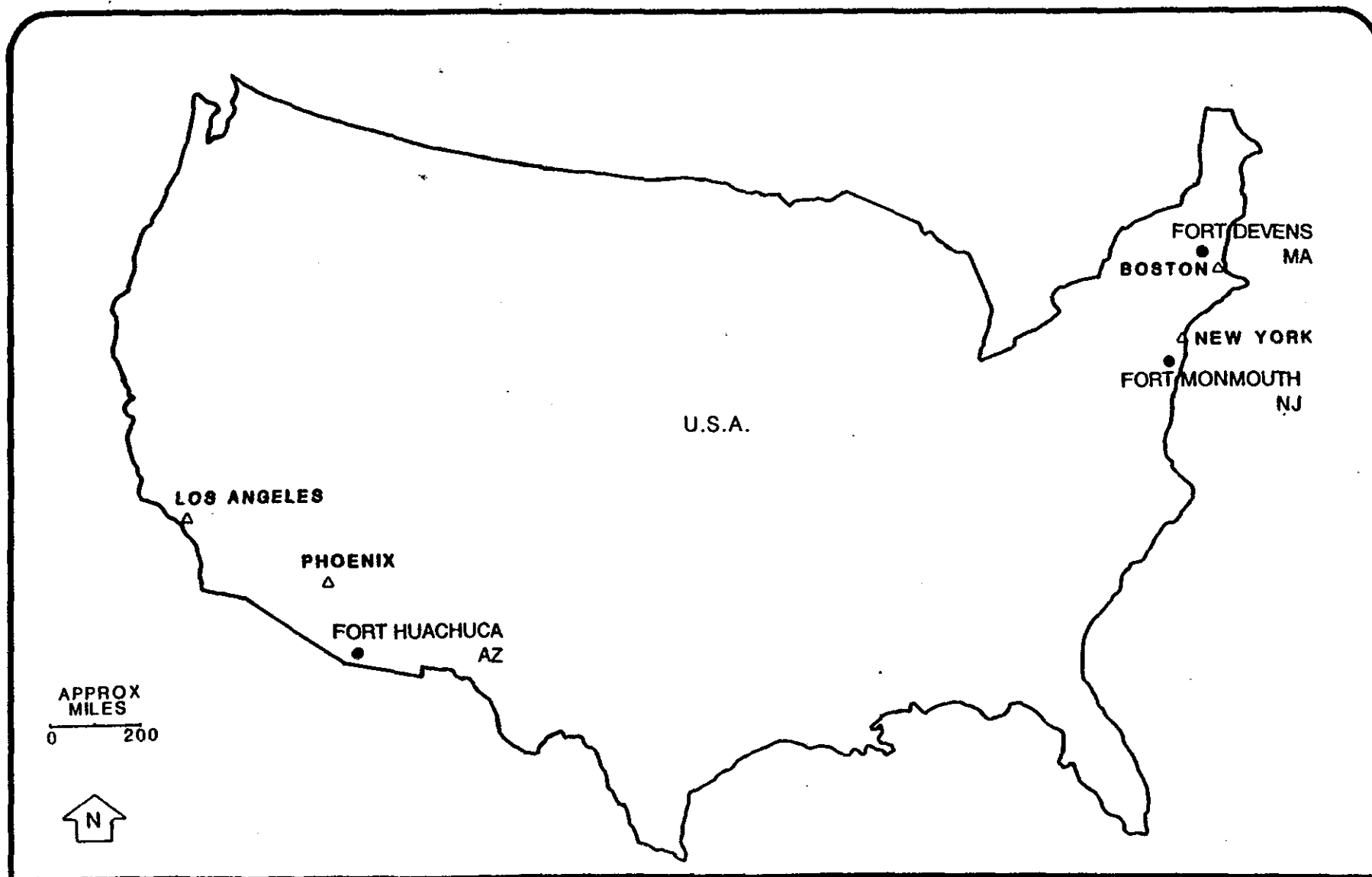
The reservation is divided into three training ranges: the East Range, the South Range, and the West Range. These ranges account for 96 percent (70,762 acres) of the total area, with the Cantonment area encompassing 2,582 acres. Due to the large area of open space and variable terrain, most types of ground training, tactical exercises, and combat maneuvers are possible.

3.1.1.1 Climate and Air Quality

The Fort Huachuca area has a high dry steppe climate with relatively mild winters and warm summers. The summer average high temperature is 88°F and the winter low is 32°F. Annual precipitation is 14 to 26 inches and the average wind velocity is 7 mph with daily gusts of 20 to 30 mph being common.

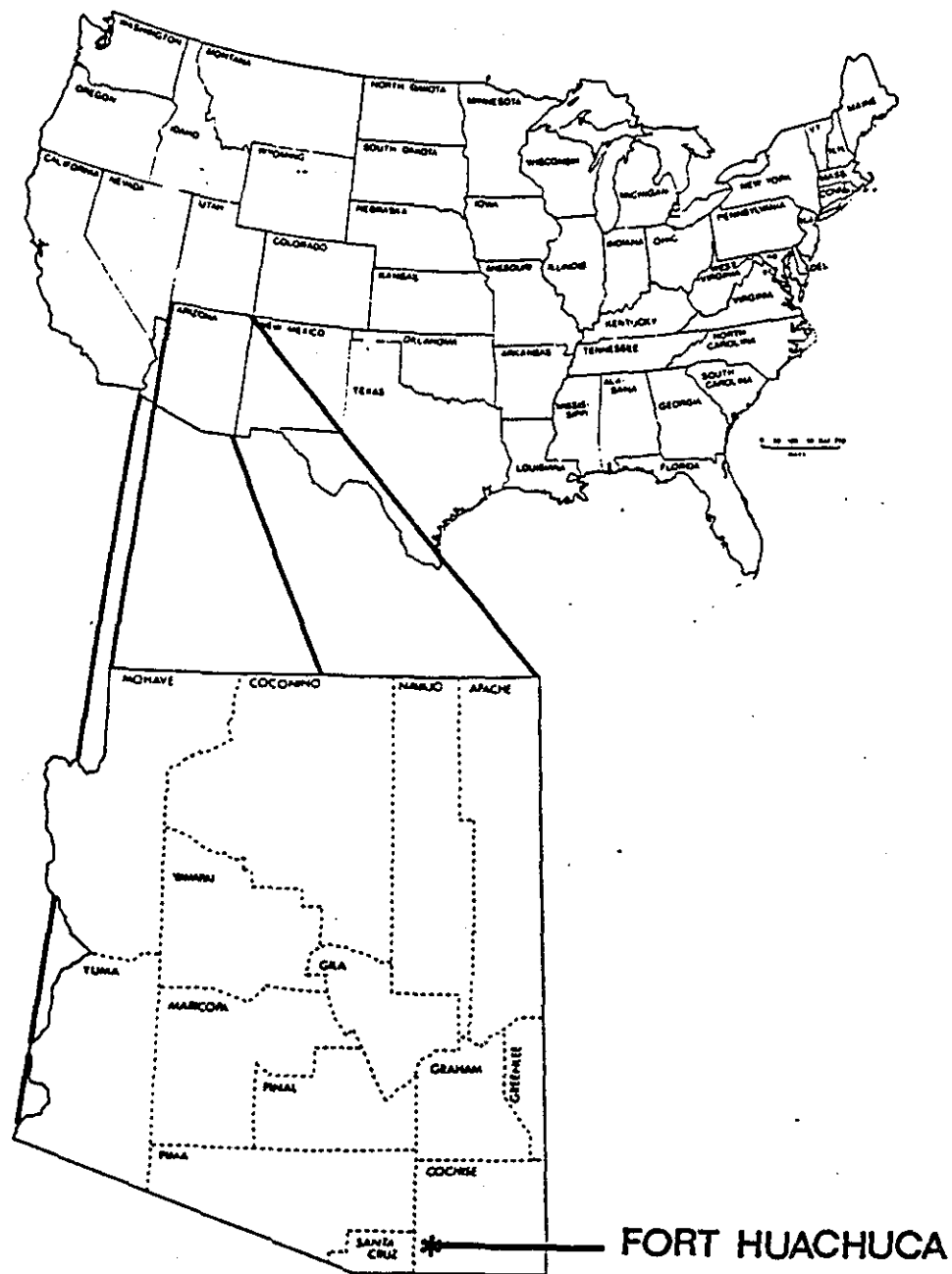
Air quality in the vicinity of Fort Huachuca is very good. Prevailing meteorological conditions are not conducive to the concentration of pollutant emissions. Daily winds tend to disperse adverse air emissions. Absent from the area are the typical major pollutant sources such as heavy industry and fossil fuel power plants. The major source of air pollution is from aircraft, private vehicles, Army vehicles, and gas heating emissions. Training exercises involving military vehicles, aircraft and artillery also produce significant quantities of dust.

The Arizona Department of Health Services, Bureau of Air Quality Control, is responsible for monitoring air pollutants in the Fort Huachuca area. From 1979 to 1984, no State or Federal emission standards for carbon monoxide, lead, or ozone were exceeded; and the maximum 24-hour average for particulates was exceeded on only one day [U.S. Army Corps of Engineers, Los Angeles District, 1989]. However, occasional episodes of high particulate concentrations are not uncommon for arid environments during high winds.



**LOCATIONS OF FORT HUACHUCA, FORT DEVENS,
AND FORT MONMOUTH**

**FIGURE
3.1-1**



Adapted from Huachuca City Resource Book

FORT HUACHUCA LOCATION MAP

**FIGURE
3.1-2**

3.1.1.2 Hydrology and Water Quality

Fort Huachuca is located within the upper San Pedro River Basin. This area receives surface runoff and groundwater from precipitation and snow melt in the local mountains. Potable water in the area comes from wells and seasonal springs, and is generally of excellent quality requiring only normal treatment.

3.1.1.3 Geology

Fort Huachuca is located within the San Pedro River Valley and Huachuca Mountains. The Huachuca Mountains consist of limestone, sandstone, shale, quartzite, granite, quartz monzonite, and volcanics primarily of Precambrian to Cretaceous origins. The San Pedro River Valley is composed of alluvial deposits originating from the mountains. The alluvium is composed of conglomerate, sandstone, gravel, silt, and clay. No evidence of recent potential seismic activity exists at the Fort; however, the State of Arizona is classified by the National Oceanic and Atmospheric Administration as Zone IIB on the Earthquake Intensity Scale, with the potential for a Richter magnitude 7.0 earthquake.

3.1.2 Fort Devens

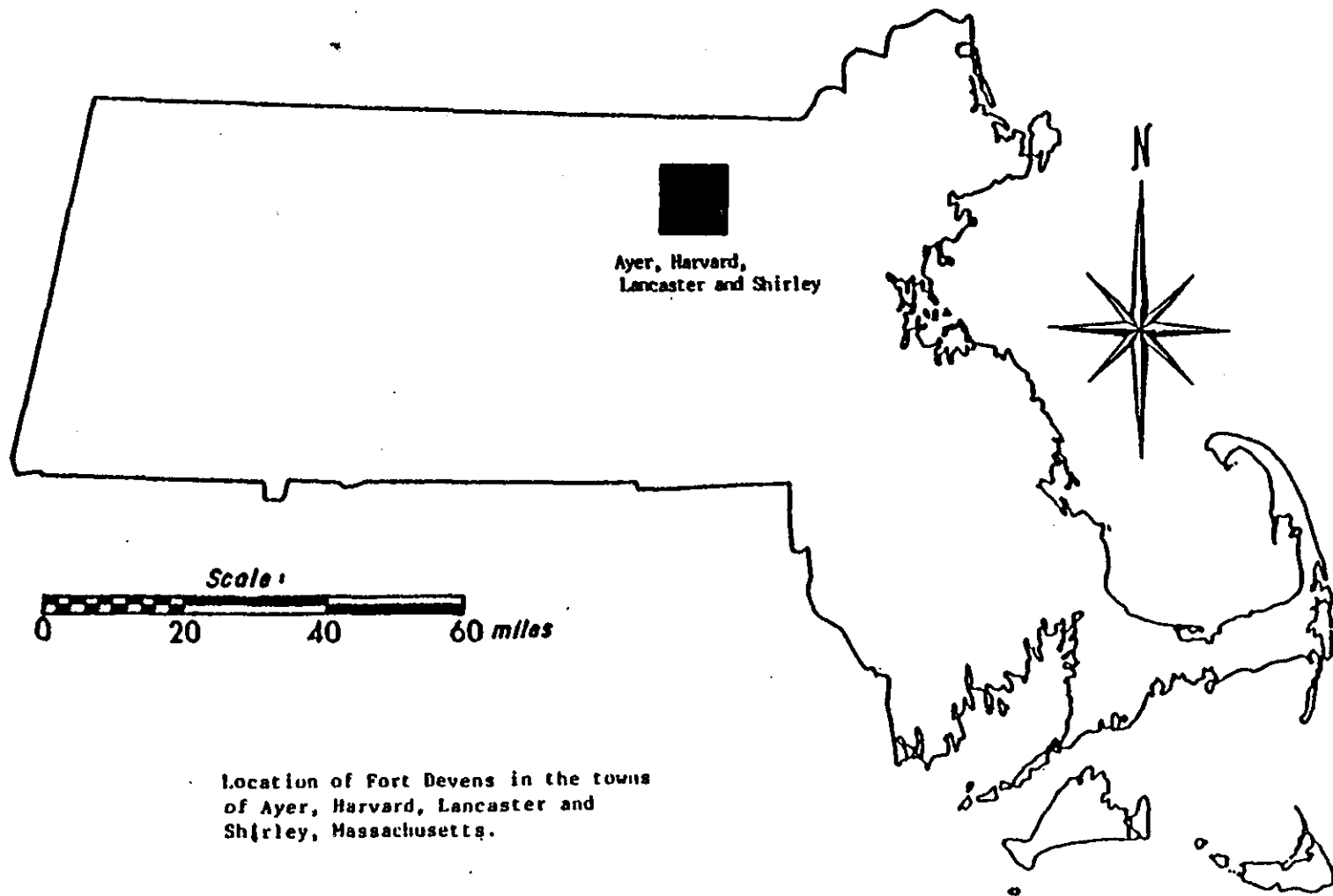
Fort Devens is located in north central Massachusetts approximately 30 miles northwest of Boston, about 20 miles north of Worcester and 15 miles south of Nashua, New Hampshire. Fort Devens is on the border of Worcester and Middlesex Counties. It is accessible by Route 2 from Boston and from Route 190 to Route 2 from Worcester. The towns abutting Fort Devens are Ayer, Shirley, Lancaster, and Harvard.

The installation encompasses 9,338 acres and is the single largest landholding in north central Massachusetts. It is the only Army base in New England. Fort Devens consists of a Cantonment area, the North Post where the Moore Army Air Field is located and the South Post area where ranges and training areas are located.

3.1.2.1 Climate and Air Quality

The climate at Fort Devens has characteristics of four seasons, with cold winters and warm summers. The average summer high temperature is 82.9°F and the winter low is 17.1°F. Wind velocity averages 12.9 mph from the northwest and southwest, and the annual precipitation is approximately 43 inches.

The Massachusetts Division of Air Quality Control, Department of Environmental Protection, (formerly known as DEQE) monitors air quality in the Fort Devens area. The 1987 Air Quality Report for Massachusetts [DEQE, 1987] indicated that in the Worcester area (Central Massachusetts) National Ambient Air Quality Standards were not exceeded



FORT DEVENS LOCATION MAP

FIGURE
3.1-3

for sulfur dioxide, carbon monoxide, nitrogen dioxide, total suspended particulates, lead, sulfate, particulate matter less than or equal to 10 microns, and ozone.

There are six emission sources affecting the air quality at Fort Devens [DEQE, 1988]. They are fossil fuel burning, incineration, volatile/halogenated organic compound (VOC) usage, volatile organic material storage, process/manufacturing, and vehicular emissions and fugitive dust emissions.

Fort Devens is required to register all the major sources of air emissions with the Massachusetts Department of Environmental Protection (DEP) (personal communication, Mr. Dwiggins, Div. of Air Quality, July 1989). The DEP then calculates the estimated controlled emissions and the potential emissions (tons/year) for total suspended particulates (TSP), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), carbon monoxide (CO), volatile organic compounds (VOC), and hydrocarbons (HYC). No violations for exceeding the air emissions standards have occurred at Fort Devens. However, a Notice of Violation was issued in 1989 when the air source registrations were not filed within the proper time period. This problem was resolved by contacting the Corps of Engineers to complete the registration forms.

3.1.2.2 Hydrology and Water Quality

Fort Devens and the surrounding area are located in the Nashua River Basin which encompasses 529 square miles within New Hampshire and Massachusetts. Fort Devens borders on 8.2 miles of the Nashua River and contains a number of small lakes and ponds. Water bodies found within the boundaries of Fort Devens include Robins Pond, Mirror Lake, Little Hell Pond, Cranberry Pond, Oak Hill Pond, and Rock Pond. Closely associated water bodies include Plow Shop Pond and Grove Pond, both located along the northeast boundary.

Until recently, paper mills and the surrounding communities discharged chemical wastes and sewage into the Nashua River creating severe water quality problems. The construction of wastewater treatment plants along the river have corrected the problem. Tests indicate that instream nitrification and summer depression of dissolved oxygen below 6.0 mg/l occur in the section of the Nashua River within the vicinity of Fort Devens.

Potable water comes from groundwater at Fort Devens and from wells, ponds or reservoirs in the surrounding communities. Degradation of groundwater is indicated around the Fort Devens landfill which could potentially spread to potable water sources on and off the installation. Groundwater quality is monitored continuously.

3.1.2.3 Geology

The bedrock in the Fort Devens area is a complex of metamorphic and granitic rocks of the Paleozoic age. Composition ranges from metasiltstone through phyllite, slate, and schist. An intrusive igneous body, the Ayer granodiorite, and metaquartzite also exist. Most

contacts between formations are faults, striking northwest. The area was historically depressed under glacial loading and is rebounding. Outwash deposits of coarse sands and pebble to boulder gravels associated with the last ice advance of the Wisconsin Glaciation blanket the Fort. Poorly sorted till deposits of silt, sand, gravel and boulders, with minor amounts of clay, were deposited directly on the bedrock surface.

3.1.3 Fort Monmouth

Fort Monmouth is located in the central eastern portion of New Jersey approximately 40 miles southwest of Newark in Monmouth County. The communities immediately surrounding Fort Monmouth are Eatontown, Red Bank, Shrewsbury, and Oceanport. It is accessible off the Garden State Parkway and State Routes 36 and 35. Fort Monmouth is located on 1,356 acres of land and is comprised of three separate areas: Main Post (630 acres), Charles Wood area (511 acres), and Evans area (215 acres). The Charles Wood area is located about one mile west of the Main Post and the Evans area is located approximately 10 miles south of the Main Post. The Main Post is the only portion of Fort Monmouth directly affected by realignment. The post contains a total of 778 buildings; however, more than half of the acreage of the Fort is devoted to recreation and open space.

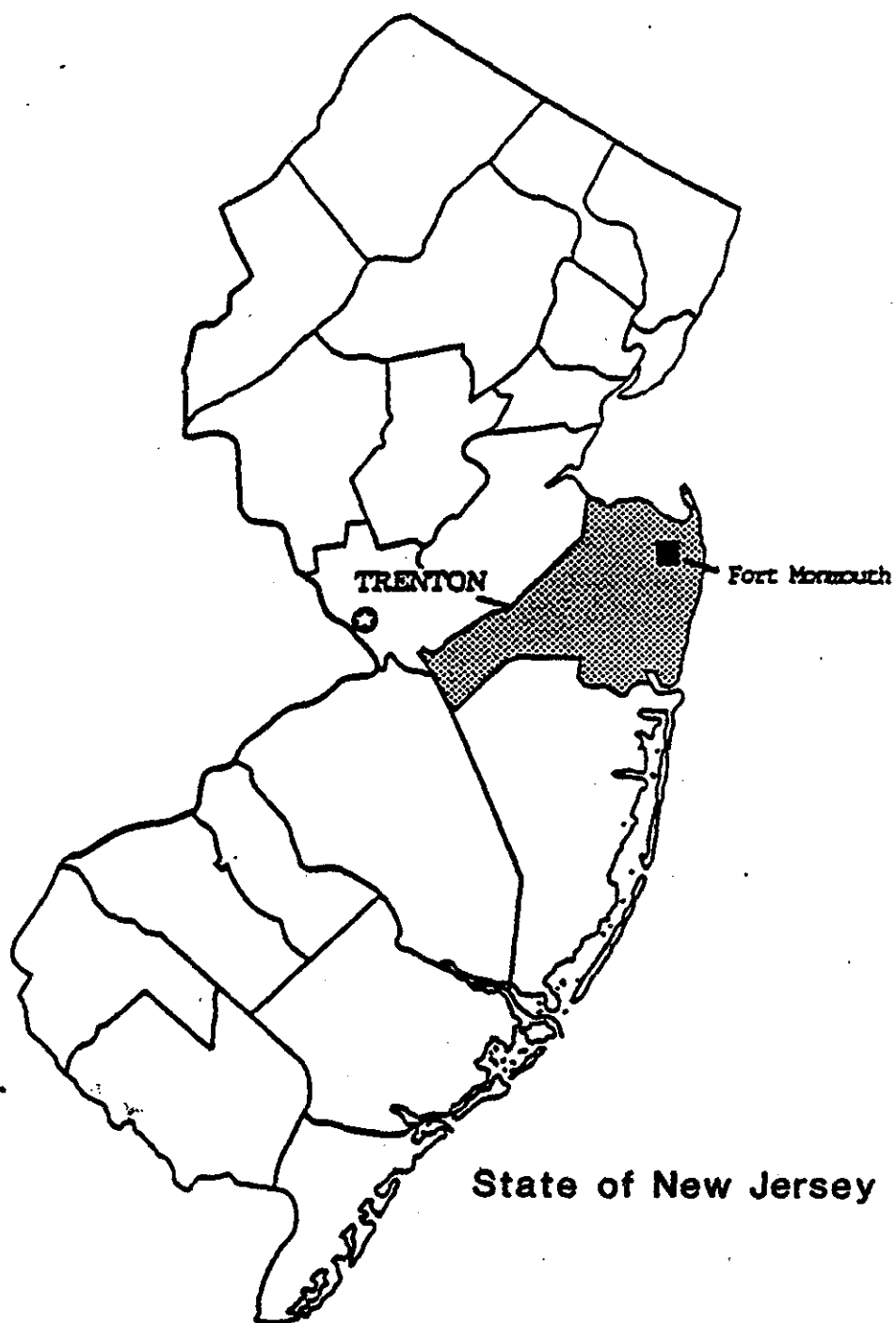
3.1.3.1 Climate and Air Quality

Fort Monmouth is located in the temperate zone of the middle Atlantic and experiences warm humid summers and freezing temperatures during the winter. The mean annual temperature is 53.6°F.

Monmouth County, the area surrounding Fort Monmouth, is monitored for carbon monoxide, particulates, and ozone levels. Only ozone levels have exceeded the New Jersey air quality standards in the last year. There are four emission sources affecting the air quality at Fort Monmouth [Harland Bartholomew and Assoc., 1984]. They include fossil fuel burning (boilers), incineration, volatile organic material storage, and vehicular emissions.

3.1.3.2 Hydrology and Water Quality

Monmouth County is bounded on the east by the Atlantic Ocean with a number of waterways crossing the county as they flow out to the ocean. Parker's Creek and Oceanport Creek are tidal estuarine creeks which border the eastern portion of the Fort to the north and south. Several freshwater waterways also flow through the Fort. The quality of surface waters in this area is considered poor due to the influx of pollutants from industrial and agricultural operations, and leachate from sewer systems.



FORT MONMOUTH LOCATION MAP

**FIGURE
3.1-4**

All potable water consumed at the Main Post and the Charles Wood Area is purchased from the New Jersey American Water Company in Tinton Falls, New Jersey. At the Evans Area, water is purchased from the Wall Township Water Sewer Utility Department (Personal communication, Mr. Desai, Environmental Management Office, Fort Monmouth, July 1989). The New Jersey American Water Co. sources of water are the Swimming River Reservoir and the Glendola Reservoir. There are no known limitations to the amount of water supplied to the Post from either source. Demand at the Main Post, Charles Wood, and Evans areas combined in 1982 was 0.7 million gallons per day. The Main Post and Charles Wood area each have one elevated water storage tank which is used to supplement the distribution system during the peak demand period and periods of fire demand or emergency conditions. Most of the wastewater from the towns located in Monmouth County is collected and conducted to regional wastewater treatment facilities.

3.1.3.3 Geology

The Fort Monmouth area is located in the Atlantic Coastal Plain which is underlain by unconsolidated sediments of the Mesozoic and Cenozoic Ages. Coastal plain sediments in Monmouth County are composed of sands, silts, and clays with interspersed gravel beds and local strata of iron-cemented sandstone. Soils on the installation have been classified as sandy loam.

3.2 BIOLOGICAL ENVIRONMENT

3.2.1 Fort Huachuca

3.2.1.1 Vegetation

Fort Huachuca is one of the most biologically diverse regions in southern Arizona. This diversity is due mainly to the wide elevational range of the post of approximately 4,800 feet from the lowest to highest elevations, to highly varied topography, and to the presence of elements of the flora of Mexico. Plant communities include semi-desert or mesquite grassland, chaparral, evergreen woodland, aspen woodland, riparian woodland, and freshwater marsh. Semi-desert grassland occurs primarily in the Cantonment area and at the bases of canyons and washes where slopes are relatively flat. Chaparral and evergreen woodlands occur primarily on canyon slopes. Riparian woodland occurs in most of the canyons. Areas with scattered aspen and freshwater marsh are the least commonly found communities on the post; the distribution of aspen woodland is limited to Huachuca Peak and Garden Canyon, and freshwater marsh is restricted to the Garden/ Huachuca and Sawmill Canyons. With the exception of semi-desert grassland, the plant communities on the post, particularly in the canyon areas, have been relatively undisturbed by human activities. Semi-desert grassland has been subject to intense disturbances, primarily from construction in the Cantonment area. Table A1-1 in Appendix A provides a list of plant species occurring at Fort Huachuca.

The proposed construction sites within the Cantonment area, which presently consist of semi-desert grassland, are maintained as lawns, or are highly disturbed. Proposed sites located on semi-desert grassland are the TTA/TTD facilities, enlisted barracks near the academic complex, and proposed roads associated with these structures.

3.2.1.2 Wildlife

The diversity of plant communities on the post, and its proximity to Mexico, contribute to the large diversity of wildlife found at Fort Huachuca. Numerous bird species are resident or migrate from Mexico to the canyon, mountain, and grassland habitats on the post. Table A1-2 in Appendix A provides a list of wildlife species. Garden Canyon, in particular, is noted for the diversity of its resident and migratory hummingbird species. Raptors, such as red-tailed hawk, are prevalent in open grassland and riparian areas. Mammal diversity is also large and includes many species of rodents, as well as predators such as mountain lion and coyote. Reptile diversity includes a large number of venomous and non-venomous snakes and lizards, some of which are known to occur outside of Mexico only in the Huachuca Mountains. Amphibians include species such as the spadefoot toad that inhabit grassland and chaparral, as well as species of toads and frogs that inhabit riparian communities in the canyons. Hunting of game birds and mammals by active and retired military personnel is permitted under license from the Fort.

Wildlife inhabiting the proposed construction areas would be typical of semi-desert or disturbed grassland in the Fort Huachuca region, and include rattlesnakes, jackrabbits, small rodents, and birds. With the exception of black-tailed jackrabbits observed on the TTA/TTD facility site, no wildlife or signs of wildlife, such as burrows or nests, were evident during the biological surveys of the construction sites. It is probable that existing development of the Cantonment area has fragmented the grassland habitat to such an extent that its value to wildlife is low relative to less disturbed areas of the post.

3.2.1.3 Fish

The streams and ponds on the base have supported introduced populations of the Gila top minnow, desert pup fish, and Gila chub. It is doubtful whether these species now occur on the post since these ponds have dried up for considerable periods of time. The post supports populations of trout, catfish, and bluegill stocked for fishing purposes.

3.2.1.4 Threatened, Endangered, and Candidate Sensitive Plant and Wildlife Species

No listed threatened or endangered plant species are reported to occur at Fort Huachuca; however, several candidate species do occur (Table 3.2-1). The diversity of available habitats and presence of the flora of Mexico make Fort Huachuca one of the most unique and botanically interesting regions in southern Arizona. Numerous plant species occur that are known nowhere else in the world, and are sufficiently rare to qualify as candidates for

Table 3.2-1

**CATEGORY 1 AND 2 CANDIDATE SENSITIVE PLANT SPECIES
THAT OCCUR OR POTENTIALLY OCCUR WITHIN FORT HUACHUCA ^{1/}**

Scientific Name	Common Name	Status ^{2/}	Habitat
<i>Astragalus hypoxylus</i>	--	2	Little known about this species. Known occurrence in Huachuca Mtns., no record from Fort Huachuca.
<i>Cheilanthes arizonica</i>	canyon lip fern	2	Moist shaded crevices on cliffs or rock outcrops, adjacent to streams in mountain canyons. No records from Fort Huachuca.
<i>Erigeron lemmonii</i>	Lemmon's fleabane	2	Partially shaded areas as an understory plant in evergreen oak or oak-pine woodland. Occurs in Fort Huachuca in Garden Canyon and near Huachuca Peak.
<i>Euphorbia plummerae</i>	--	2	Inconspicuous plant that occurs within Fort Huachuca in Huachuca Canyon and Garden Canyon.
<i>Ipomoea tenuiloba</i> var. <i>lemmonii</i>	Lemmon morning glory	2	Highly stratified forest, 4,000-6,000 ft. Occurs on rocky outcrops in Garden Canyon, Huachuca Canyon, and Blacktail Canyon.
<i>Lilaeopsis schaffneriana</i> ssp. <i>recurva</i>	--	2	Standing or flowing water, marsh conditions within Fort Huachuca, in Garden Canyon and Sawmill Canyon.
<i>Lilium parryi</i>	Lemon lily	2	Shaded mountain canyons with deep, rich, wet soils. Occurs in Sawmill Canyon and Huachuca Canyon.
<i>Margaranthus lemmonii</i>	Lemmon's globeberry	2	Known only from a primarily dry stream channel in the Huachuca Mtns. No record from Fort Huachuca.

Table 3.2-1

**CATEGORY 1 AND 2 CANDIDATE SENSITIVE PLANT SPECIES
THAT OCCUR OR POTENTIALLY OCCUR WITHIN FORT HUACHUCA ^{1/}**

Scientific Name	Common Name	Status ^{2/}	Habitat
<i>Pectis imberbis</i>	beardless fetid-marigold	2	Grasslands, disturbed slopes along roadside banks. No record from Fort Huachuca, but potentially occurs below 5,500 ft. Of all candidate sensitive species, is the most likely to occur within the proposed construction area.
<i>Rumex orthoneurus</i>	--	1	Occurs at high elevations in the Chiricahua Mtns., 8,000-8,500 ft. No record from Fort Huachuca.
<i>Senecio huachucanus</i>	Huachuca Mtn. butterweed	1	Moist loam soils on slopes in ponderosa pine forest at 7,300-8,400 ft. No record from Fort Huachuca.
<i>Talinum marginatum</i>	Tepic flame flower	2	Thin gravelly soil in open spots at about 7,100 ft. No record from Fort Huachuca.

^{1/} References: Kearney and Peebles, 1964; F. Reichenbacher, personal communication; Rutman 1989a,b; U.S. Department of the Interior, Army Corps of Engineers, 1989.

^{2/} Status as determined by the U.S. Fish and Wildlife Service. Category 1 species are those for which sufficient data are available to support federal listing as threatened or endangered. Category 2 species are uncommon but threat or distribution data are insufficient to support federal listing. Species that are extinct, more common, or taxonomically questionable (i.e., Category-3 species) are not listed.

Federal and state lists. These species occur primarily in Garden and Huachuca Canyons. No listed or candidate sensitive plant species are known or were observed to occur on the proposed construction sites in the Cantonment area. It is possible that populations of rare plants remain undiscovered in other undisturbed portions of semi-desert grassland in the Cantonment area.

Numerous threatened, endangered, and candidate sensitive wildlife species are known to occur at Fort Huachuca (Table 3.2-2). These include raptors such as gray hawks and common black hawks, as well as the recently listed endangered Sanborn's long-nosed bat. The bat feeds on nectar of agaves. A few agaves were observed on the proposed TTA/TTD site, but the agave population in the Cantonment area is quite small relative to those in the other areas of the Fort and is not considered essential to the survival of the bat because of the few agaves occurring there. The Post is currently in the first stages of development of a management plan for the species. This plan will involve protection of roosting sites, preservation of large areas containing agaves, and minimization of electronic and other activities potentially affecting the species. Figure 3.2-1 provides a map of distribution of agaves on the South and West Ranges. Much of these areas is currently not used intensively for military training activities. Agaves occur in higher densities above 4,800-ft.elevation.

Due to the fragmented nature of the habitat and proximity to human activities, other sensitive wildlife species are not known and would not be expected to occur on or in the vicinity of the proposed construction sites.

3.2.2 Fort Devens

3.2.2.1 Vegetation

Vegetation at Fort Devens consists of communities that are in various stages of transition between grassland, conifer forest, and hardwood forest, as well as shrub and wetland communities (Tables A2-1 and A2-2 in Appendix A). Species of birch, maple, pine, oak, elm, hickory, and hemlock are typical forest elements. Much of the forested area has been subject to wildlife habitat "improvement" practices of the Fort Devens Natural Resources Office, which includes use of fire and herbicides, such that relative abundances of native plant species probably reflect intense management by humans rather than natural ecological succession. Portions of the forests, along with riparian vegetation associated with small ponds and streams, occur in the Main Post in addition to cultivated landscapes. A large grassland occurs in a southwestern portion of the post and is the site of the Turner Parachute Drop Zone. An acid bog with black spruce/shrub communities occurs on the southeast side of Mirror Lake. Other wetland areas include the Oxbow National Wildlife Refuge located east of the Nashua River, and three human-made ponds. The post is also surrounded by aquatic and wetland communities, including the Nashua River and associated tributaries, wetlands, streams, ponds, and brooks. The proposed construction sites are located in areas already disturbed by roads and cultivated landscapes.

Table 3.2-2

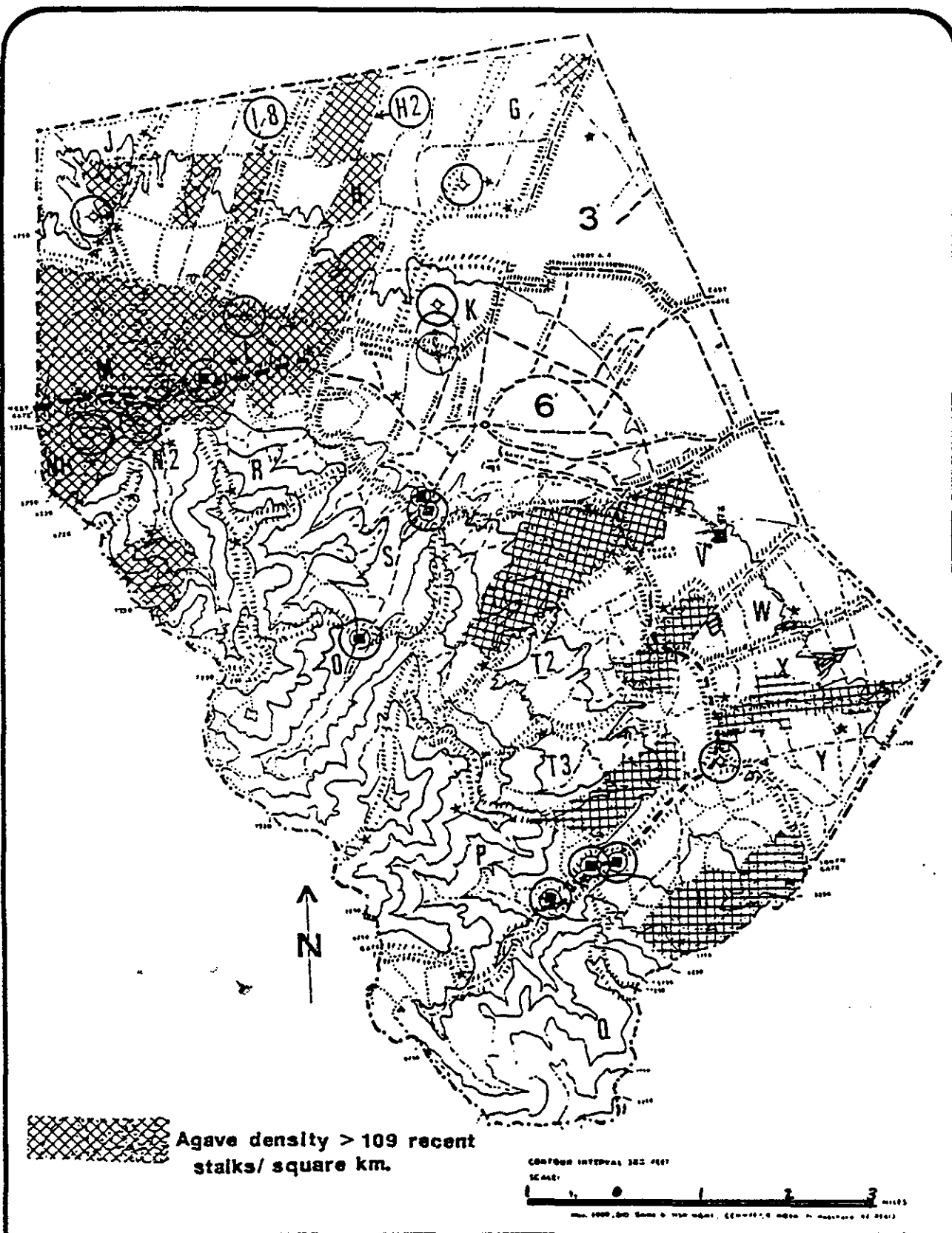
**THREATENED, ENDANGERED, AND CANDIDATE SENSITIVE
WILDLIFE SPECIES THAT OCCUR OR POTENTIALLY OCCUR WITHIN FORT HUACHUCA ^{1/}**

Scientific Name	Common Name	Status ^{2/}	Habitat	Occurrence ^{3/}
BIRDS				
<i>Amazilia violiceps</i>	Violet-crowned hummingbird	State C	Breed in riparian habitats in Cochise County	Probable, vicinity of post.
<i>Buteo nitidus</i>	gray hawk	State T	Riparian woodland	Highly probable
<i>Buteogallus anthracinus</i>	common black-hawk	State C	Riparian woodland	Highly probable
<i>Falco peregrinus anatum</i>	American peregrine falcon	Federal E State C	Tall cliffs near water	Casual visitor, migrant
<i>Haliaeetus leucocephalus</i>	bald eagle	Federal E State E	Riparian woodland	Casual visitor, migrant
<i>Ictinia mississippiensis</i>	Mississippi kite	State C	Riparian woodland	Highly probable
<i>Polyborus plancus auduboni</i>	crested caracara	State C	Open brushland; a raptor, feeds on carrion, small mammals	Highly probable
<i>Strix occidentalis</i>	spotted owl	State C	Conifer forest, canyons	Highly probable
MAMMALS				
<i>Choeronycteris mexicana</i>	Mexican long-tongued bat	State T	Roosts in caves, feeds on nectar of agaves. Biology, population status poorly known.	Probable
<i>Lasiurus borealis</i>	red bat	State C	Riparian corridors among oaks, sycamores, cottonwoods in central and southeastern Arizona; roosts in trees	Probable
<i>Leptonycteris sanborni</i>	Sanborn's long-nosed bat	Federal E State E	Roosts in caves, feeds on nectar of agaves	Known

Table 3.2-2

THREATENED, ENDANGERED, AND CANDIDATE SENSITIVE
WILDLIFE SPECIES THAT OCCUR OR POTENTIALLY OCCUR WITHIN FORT HUACHUCA ^{1/}

Scientific Name	Common Name	Status ^{2/}	Habitat	Occurrence ^{3/}
MAMMALS, (continued)				
<i>Sorex arizonae</i>	Arizona shrew	State C Resident	Resident from northern Mexico to southeastern Arizona and adjacent southwestern New Mexico. Riparian edges in pine-oak forests.	Highly probable
REPTILES				
<i>Crotalus willardi willardi</i>	Arizona ridge-nosed rattlesnake	State C	Moist canyons in coniferous forest, pine and pine-oak woodland.	Highly probable
<p>^{1/} References: Arizona Game and Fish Department, 1988; Burt and Grossenheider, 1976; Ehrlich et al., 1988; Stebbins, 1985; USDD, ACOE, 1989.</p> <p>^{2/} Federal and state agencies (U.S. Fish and Wildlife Service and Arizona Game and Fish Department, respectively) maintain separate lists of sensitive species. Endangered species are those for which extinction is possible, either nationally (fed. endangered) or in Arizona (state endangered) in the near future unless recovery efforts are undertaken. Threatened species are those which could become endangered in the near future. Candidate species are those whose populations are declining and listing is under consideration by Federal or state agencies.</p> <p>^{3/} The term "probable" means that the species occurs in the vicinity of Fort Huachuca and/or in habitats equivalent to those found on the post.</p>				



**AGAVE DISTRIBUTION IN SOUTH
AND WEST RANGES - FORT HUACHUCA**

**FIGURE
3.2-1**

3.2.2.2 Wildlife

Approximately 49 species of mammals, 13 species of amphibians, and 18 species of reptiles are believed to utilize the habitat at Fort Devens. The bird populations include native and migratory species indicative of the habitats of the regional area. The Nashua River Watershed is within a migration corridor for a wide variety of bird species [FORSCOM, 1987].

The forests and wetlands of Fort Devens and vicinity support a large diversity of wildlife species (Tables A2-3 through A2-6 in Appendix A). Large mammals include species such as white-tailed deer and red fox. Small mammal species include eastern cottontail, eastern gray squirrel, mice, and bats. Bird species include resident and migratory waterfowl, shorebirds, resident terrestrial species such as red-tailed hawk and northern cardinal, and migrant terrestrial species such as the eastern kingbird and eastern phoebe. Reptiles and amphibians typical of forest and riparian habitats are also common on the post. Preliminary results from biological surveys of the Nashua River indicate that it supports invertebrate and vertebrate populations of species that are known tolerators of poor water quality, reflecting pollution of the river by sources of organic waste upstream from Fort Devens. Hunting, trapping, and fishing are permitted on the post in certain areas according to State regulations. The forest and wetland habitats on the post are managed by the Fort Devens Natural Resources Office in order to enhance their value to wildlife.

Wildlife in the vicinity of the proposed construction sites are largely typical of eastern hardwood forest, although the proximity of the sites to human activities probably reduces the overall diversity of species that would otherwise exist in the absence of human presence. Adaptable species such as raccoons, house mice, and the American robin would be relatively abundant in these areas.

3.2.2.3 Fish

Throughout the Nashua River system there is evidence of an impoverished finfish community. Rough and forage fish such as the yellow bullhead (*Ictalurus natalis*), white sucker (*Catostomus commersoni*), and golden shiner (*Notemigonus crysoleucas*) predominate. The presence of sludge and oxygen-depleted conditions appear to be causative factors for low populations of finfish. A more varied population of warm water species has developed with improving water quality and fish management. The species of fish represented in the Nashua River and lakes and ponds in the region include largemouth bass (*Micropterus salmoides*), smallmouth bass (*Micropterus dolomieu*), chain pickerel (*Esox niger*), brook trout (*Salvelinus fontinalis*), brown trout (*Salmo trutta*), and bluegill sunfish (*Lepomis macrochirus*).

Fish species caught during surveys of the human-made ponds and Mirror Lake on-post, as well as of aquatic habitats of the Nashua River watershed region, include bullhead, largemouth bass, trout, and bluegill sunfish.

3.2.2.4 Threatened, Endangered, and Candidate Sensitive Plant and Wildlife Species

While two Federally listed endangered plant species are known from regions of the counties surrounding Fort Devens, no rare plant species are reported to occur in the vicinity of the proposed realignment activities. Listed sensitive wildlife species such as the bald eagle and peregrine falcon occur as transients rather than residents. These and other sensitive species are not known by the U.S. Fish and Wildlife Service or by the Massachusetts Natural Heritage Program to occur in the vicinity of the proposed construction activities.

3.2.3 Fort Monmouth

3.2.3.1 Vegetation

Plant communities in the Monmouth County region and at Fort Monmouth consist of mixed hardwood-pine forest, as well as salt marshes and other wetlands (Table A3-1 in Appendix A). Some of the native terrestrial vegetation on the post is managed or planted. Numerous streams and creeks drain the Main Post, and portions of these waterways are bordered by salt or freshwater marsh vegetation. Freshwater marsh vegetation also borders several ponds and small lakes that occur naturally or have resulted from human-made dams.

The natural vegetation at Fort Monmouth consists mostly of oaks (*Quercus* spp.), pines (*Pinus* spp.), honey locust (*Gleditsia triacanthos*), black locust (*Robinia pseudoacacia*), huckleberries (*Gaylussacia* spp.), and ferns (*Athyrium* spp.). The wooded area located in the southwestern portion of the Charles Wood area contains significant quantities of white birch (*Betula papyrifera*) and American holly (*Ilex laevigata*) [Harland Bartholomew and Assoc., 1984]. Many other species of trees and shrubs are naturally present in lesser quantities. Fort Monmouth has developed a Landscape Planting and Maintenance Plan and has been implementing this plan since 1969.

3.2.3.2 Wildlife

The terrestrial and aquatic ecosystems of Monmouth County and Fort Monmouth support a large diversity of mammals, resident and migratory birds, amphibians, reptiles, and fish. Wildlife known to exist in Monmouth County is listed in Tables A3-2 through A3-6, Appendix A. Some of the most common species include the raccoon, striped skunk, eastern chipmunk, eastern gray squirrel, muskrat, eastern cottontail rabbit, and Norway rat [Monmouth County Parks System, 1989].

Approximately 153 species of birds are known to exist in Monmouth County. Some common species include the mallard, Canada goose, greater black-backed gull, herring gull, rock dove, mourning dove, blue jay, American crow, Carolina chickadee, northern mockingbird, American robin, European starling, house sparrow, red-winged blackbird, common grackle,

northern cardinal, house finch, and song sparrow [Monmouth County Audubon Society, 1989].

Twenty-four species of amphibians and 30 species of reptiles are known to exist in Monmouth County. The most common species of amphibians include the red back salamander, spring peeper, wood frog, bullfrog, green frog, eastern spadefoot toad, Fowler's toad, and pickerel frog [Monmouth County Parks System, 1989]. The most common species of reptiles include the common snapping turtle, spotted turtle, eastern painted turtle, eastern box turtle, northern fence lizard, northern brown snake, northern water snake, eastern garter snake, eastern hognose snake, and eastern milk snake [Monmouth County Parks System, 1989].

3.2.3.3 Fish

The Raritan and Sandy Hook Bays are important commercial and sport fishery areas (personal communication, Mr. Gorski, National Marine Fisheries Service, New Jersey, July 1989). The most common freshwater species of fish that occur in Monmouth County include catfish (*Ictalurus* spp.), minnows (*Cyprinus* spp.), white perch (*Morone americana*), white sucker (*Catostomus commersoni*), and cruppy (*Pomoxis* spp.). The State of New Jersey Division of Fish, Game, and Wildlife stocks some freshwater streams with rainbow (*Salmo gairdneri*) and brook trout (*Salvelinus fontinalis*) for a "put-and-take" trout fishery (personal communication, Mr. Boyiek, NJ Div. of Fish, Game, and Wildlife, July 1989).

3.2.3.4 Threatened, Endangered, and Candidate Sensitive Plant and Wildlife Species

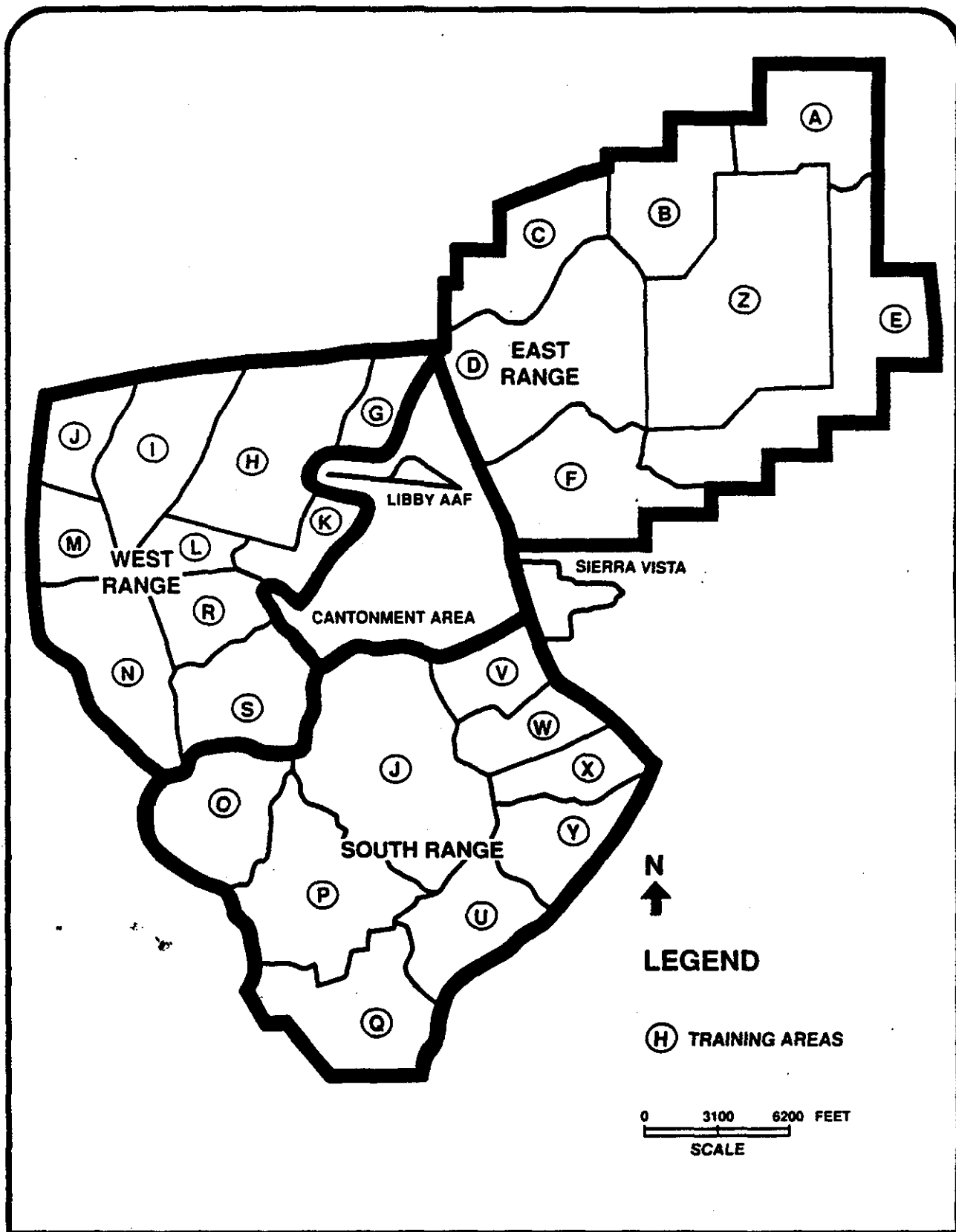
No listed or candidate sensitive plant species have been reported to potentially occur in Monmouth County or on-post. Numerous Federal or state listed wildlife species potentially occur in Monmouth County, including the bald eagle (*Haliaeetus leucocephalus*), peregrine falcon (*Falco peregrinus*), osprey (*Pandion haliaetus*), pine snake (*Pituophis melanoleucus*), and pine barrens treefrog (*Hyla andersonii*). Although the post supports potential habitat for these and other sensitive species, none are known to occur on the post.

3.3 SOCIOECONOMIC ENVIRONMENT

3.3.1 Fort Huachuca

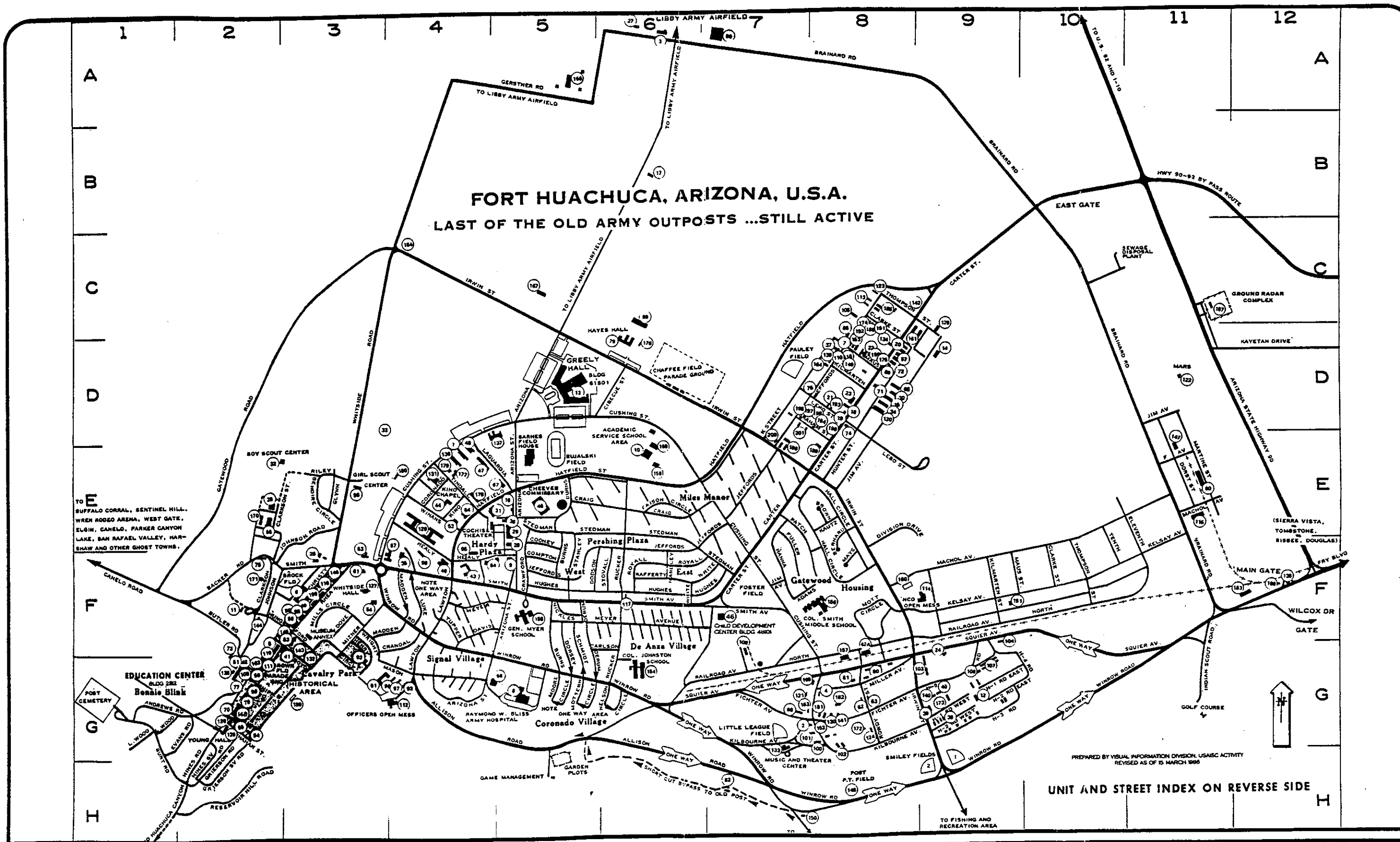
3.3.1.1 Land Use

Land use at Fort Huachuca is divided into areas for field training and exercises, and areas of concentrated build-up for classroom training, housing, administration, and service facilities. Of the 73,344 acres of military reservation, about 2,582 acres encompass the built-up Cantonment area, 2,837 acres are utilized for the Libby Army Airfield, and 67,925 acres comprise open training areas (Figure 3.3-1).



FORT HUACHUCA LAND USES

**FIGURE
3.3-1**



FORT HUACHUCA CANTONMENT AREA

FIGURE 3.3-2

The Cantonment area is used for on-base housing, dining, medical, dental, administrative, recreational, service, maintenance, school and community facilities, as well as the military academic complex. The area hosts all of the new construction projects proposed in the realignment action, particularly in the area north of Irwin Street and west of Hatfield Street. This area currently contains the Chaffee Parade Field and open land designated as Reserved Land/Buffer. The proposed action would involve the relocation of the parade field to the north and the construction of enlisted barracks, a dining hall, club, gym, outdoor sports complex, and maintenance and training facilities.

Units training and conducting testing and evaluation operations at Fort Huachuca vary in structure and mission assignments. They consist of government agencies other than DOD, Active and Reserve Components Units of all services, and include Armor, Artillery, Airborne, Combat Aviation, Infantry, Special Forces, Special Operations, Rangers, Transportation, Signal, Intelligence, Medical, Military Police, Finance, Engineer, and many more. Training includes, but is not limited to, mountain/desert adventure and escape and evasion training; up to brigade-size field training exercises; tank gunnery and maneuver and aerial gunnery. In addition, there are many research, engineering, and development activities testing state-of-the-art equipment. Testing is conducted by military organizations and civilian contractors.

The open areas, used for training, military exercises and evaluation of equipment, are divided into the South Range, East Range, and West Range. It should be noted that training areas shown in Figure 3.3-1 are arbitrary designations used by Range division staff to separate incompatible uses, such as night tank training and night infantry training.

With approximately 28,544 acres, the East Range is the largest range on Fort Huachuca. Located directly north of Sierra Vista, the East Range is physically separated from the remainder of the installation by Arizona Highway 90. This range is used for research and development testing, indirect firing, and has six training areas, a demolition range, a tactical assault landing strip, and three drop zones.

- o Hubbard Assault Strip. This is a dirt assault strip surveyed and approved by the United States Air Force and can accommodate C-130 Aircraft.
- o Impact Area. This area (Training Area Z) consists of approximately 17,700 acres and contains targets of various types for 155mm Self Propelled Artillery and 4.2 inch, 60mm, and 81mm mortars. High explosive ammunition may be fired on this range. During periods of artillery live-fire, the entire east range is closed to all other activities.

The direct firing ranges at Fort Huachuca are primarily located in the South Range, south of the Cantonment area and containing a total of 20,990 acres, including almost all of the part of the Huachuca Mountains which are located on-post. It contains 12 training areas comprising 12,245 acres and 15 firing ranges. The remaining 8,745 acres are set aside as impact areas.

- o Range 1. Due to proximity to the Cantonment area and the possible noise hazard to family housing occupants, coupled with the conflict with other ranges, this range was deactivated.
- o Range 2. This is an M-16 Rifle Zero Range with a target width of 100 meters and 32 firing points. Maximum range is 75 meters; however, primary use is derived from 25 meter zero and Alternate Course C firing by Reserve Component Units using the .22 caliber adapter on M-16 Rifles. Due to the geographical alignment of Ranges 2 and 4A, Range 4A cannot be fired when Range 2 is in use.
- o Range 3. This is a small bore multipurpose range with 16 firing points, and a maximum range of 75 meters. This range can be configured for Standard Law Enforcement pistol or shotgun qualification and .45 caliber submachine gun familiarization. If necessary, this range can be used in lieu of Range 2 for M-16 Rifle Zero.
- o Range 4. This is a pistol range complex consisting of two small ranges with various functions. Range 4A is a competition pistol range with 25 firing points with target distances at 25 and 50 meters. Range 4B is the Army Standard Pistol Qualification course consisting of four firing points with target distances from 7-31 meters. Due to geographical alignment, Range 2 cannot be fired when Range 4A is in use.
- o Range 5. A grenade range with eight throwing points, constructed concrete wall with hand grenade pits, and an impact area that is fenced off in a ravine. Only HE hand grenades are thrown on this range.
- o Range 6. Range 6 is a known distance range (KD) consisting of 50 firing points and six firing lines ranging from 100 to 1,000 yards.
- o Range 7. Based on this range location and resultant conflict with other ranges, it has been deactivated. All tank gunnery is now conducted on Ranges 12A, 12B, and 12C.
- o Range 8. This is a rifle marksmanship field fire and night fire range with 35 firing points and target distances of 75, 150, and 300 meters.
- o Range 9. This is a multipurpose range complex used for a variety of weapons. Range 9A consists of four firing points and is a multipurpose machine gun range capable of supporting .50 caliber and Squad Attack Weapon (SAW). Range 9B is used for 106mm recoilless rifle, LAW, and M18A1 Claymore Mines.
- o Range 10. This is a grenade launcher range capable of supporting the M-79 and M-203 Grenade Launchers. Since high explosive ammunition cannot be fired on this range, it is also used as a disposal area for the Explosive Ordnance Disposal Detachment.
- o Range 11. This range is no longer used.

- o Range 12A. This is a gunnery range used primarily by Armor Scout Platoons for live-fire and is capable of accommodating .50 caliber, 7.62mm, and 20mm. High explosive ammunition cannot be fired on this range. Ranges 12B and 12C cannot be fired when Range 12A is in use.
- o Range 12B. This is a tank gunnery range for Tank Tables requiring the Main Tank Gun, .50 caliber, and 7.62 COAX Machine Gun to be fired in a stationary mode, and for bore sighting of the main tank gun. This range is also used for 8-inch and 155mm artillery fire in the direct fire mode. Laser range finders are authorized for use. High explosive ammunition cannot be fired on this range. Ranges 12A, 12C, and 13 cannot be fired when Range 12B is in use.
- o Range 12C. This is a tank gunnery range for Tank Tables requiring main tank gun, .50 caliber, and 7.62 COAX machine gun and capable of accommodating platoon live-fire while moving. This range is also used for aerial gunnery firing the 2.75 rocket with MK 40 motor, minigun, and door gunnery. High explosive 2.75 rockets may be used. All other projectiles must be non-explosive.
- o Range 13. This is a M-16 Rifle marksmanship record fire range with 16 firing positions and pop-up targets at distances from 50 meters to 300 meters. Ranges 12A, 12B, and 12C cannot be fired when Range 13 is in use.
- o Range 14. This is a squad attack course situated so that the using unit can develop a scenario that best suits their requirements and mission. Scenarios are prepared indicating target positions, firing positions, direction, and method of attack. Scenarios are reviewed and approved or modified by the Range Control Officer prior to live-fire exercise. Weapons authorized for use are M-16 rifle, M-60 machine gun, squad attack weapon, and 9mm pistol. Pyrotechnics may be used to simulate artillery fire or provide smoke only if the fire danger is low and their use is by command detonation only. Range 16 cannot be fired when Range 14 is in use.
- o Range 15. Deactivated.
- o Range 16. This is a platoon attack course. Capabilities, requirements, and restrictions are identical to Range 14. Range 14 cannot be fired when Range 16 is being used.

The West Range is located to the west of the Cantonment area and contains approximately 18,200 acres. This area is a no live-fire area and is used primarily for mounted and dismounted maneuver and tactics training. Research and Development Testing is also conducted in this area.

The following training facilities are located throughout the three major training areas.

- o Rappelling Tower
- o Rappelling Cliffs
- o Leadership Reaction Course

- o Obstacle Course
- o Confidence Course
- o Mask Confidence Course
- o Aircraft Mockups Simulating C-130, C-141, and C5A cargo areas
- o Land Navigation Courses
- o Drop Zones for Personnel, CDS, and Heavy Equipment
- o Tactical Assault Strip (C-130)
- o Helicopter pads at elevations from approximately 4,500 MSL to 8,500 MSL

In fiscal year 1988 (October 1987 - September 1988), the training areas were utilized by 58,317 persons for a total of 4,766,647 person-hours, while the firing and combat ranges were utilized by 78,845 persons for 5,187,631 total person-hours. Open area training activities by the Intelligence Center and School utilize approximately 15 percent of range use and 40 percent of the training area use on-base. The Intelligence Center and School presently conducts training on range areas L, M, N, W, X, and Y (Figure 3.3-1). Additional future field training would be similar to current Intelligence School activities at Fort Huachuca. These activities include small arms weapons firing, navigation and field training, and command post exercises for classes ranging from 8 to 36 students. Approximately 10 times per year weekend training exercises will be conducted for groups of 90 to 100 students.

Training exercises are programmed to increase in range locations where presently performed, as the realignment is implemented. The following is a description, in sequence, of training exercises presently performed by the Intelligence Center and School at Fort Huachuca. The School requests training areas from the Range division of the installation's Directorate of Planning, Training and Mobilization on a priority basis based on annual programming of instruction. Data describing the training are provided and the Range division allocates training areas. Restrictions may be imposed for environmental or other reasons. As training exercises begin, School instructors drive tracked and wheeled vehicles and transport equipment to the allocated field site. The students conduct tactical drills in the assembly and operation of electronic communications and intelligence equipment in preselected positions. To maintain consistency of training operations and to facilitate evaluation of student performance, repetitive use of training sites is a common practice. Training with this equipment is done in stationary modes, while tactical systems are not moving. Therefore, cross country random maneuvering of vehicles is not required during training. Vehicles operators are instructors or School cadre members, not students, and are trained to follow prescribed routes and avoid cross-country maneuvering.

The area surrounding Fort Huachuca is Federally owned and consists of the Sierra Vista District of the Coronado National Forest. The land is used primarily for grazing, but other uses also occur. The management areas reflect the use of these areas which include:

- o Visual Resources and Semi-Primitive Dispersed Recreation
- o Dispersed Recreation
- o Livestock Grazing (Level D, Intensive Livestock Management)
- o Unique Resources (Including Riparian Areas)

- o Research Natural Areas
- o Wilderness

The State of Arizona owns a small portion (approximately 10 percent) of the surrounding lands, some of which has been identified by the State Land Department to be potentially suitable for future urban development. Basically, the Urban Lands Management Act provides an outline of steps to involve local and general planning agencies in the process of disposing of the lands so as to maximize the revenues provided to the state from the lands.

Cochise County controls land use of the private lands outside of incorporated towns. The lands around the Fort are classified as urban growth, resources productive or resource conservation. Urban growth areas are considered non-intensive growth areas having an urban character. Resource productive areas shall be protected and preserved for production of life-sustaining resources such as food, fibers and minerals, and for conservation of natural resources and rural lifestyles. Resource conservation areas will be established to preserve and protect the natural environment and scenic beauty of Cochise County, to preserve wildlife habitats and recreation areas, to protect water resources, and to control growth in areas susceptible to geologic hazards.

Sierra Vista has annexed approximately 3,000 acres of vacant land in the past several years. Within the developed parts of the city, 78 percent of the land is used for residential uses, largely single family. Most commercial uses are situated in the commercial corridors along Fry Boulevard and South Highway 92.

Huachuca City is located across from the north gate of Fort Huachuca. Development occurs on both sides of State Route 92, approximately five miles from Sierra Vista. The community has developed at the north and south extremes of the city limits, with development in the center being inhibited by terrain features and land ownership patterns, creating temporary service and access problems for the community. These problems are now being addressed by two master planned developments.

3.3.1.2 Population

Fort Huachuca is located in Cochise County, Arizona, which had an estimated 1988 population of 102,400. The major cities in the county are Sierra Vista (34,290), Douglas (14,105), Bisbee (8,065), Wilcox (4,045), and Benson (3,975).

The majority of the population in the area surrounding Fort Huachuca live in the adjacent cities of Sierra Vista and Huachuca City, both located in the southwest corner of Cochise County. Huachuca City, located 64 miles southeast of Tucson and five miles northwest of Sierra Vista at an elevation of 4,245 feet, originated as a stop on the now-abandoned Southern Pacific Railroad. The city, incorporated in 1958, had a population of 2,100 in 1985.

Sierra Vista, previously called Fry, was established 35 years ago and incorporated in 1956 with a population of 1,671. The 1989 population was 34,290. In Sierra Vista, about 25 percent of the population are retirees. Sierra Vista experienced a 74+ percent growth between 1970 and 1980; more than double the growth rate of the state, county, and Huachuca City for the same period. From 1980 to 1985, this growth was comparable to the growth of these other places. This increase was due mainly to the resurgence of military operations at the Fort. In 1971, the city annexed portions of the Fort and increased its land by 115 square miles and gained 6,659 residents. Local sources estimate the 1989 population at 41,500 within a 10-mile radius of the city. Huachuca City and the outlying developments are direct recipients of this growth, but have more stable growth rates.

The demographic structure of Sierra Vista and Huachuca City is a clear reflection of Fort Huachuca's impact on the local population. A high percentage of the city's population and labor force is dominated by males between the ages of 20 and 34. In fact, there is an 18 percent male dominance in the sex ratio locally. The military assigned to Fort Huachuca and their dependents account for almost half of the area's population.

3.3.1.3 Socioeconomic Activity

Employment

As a major employer and consumer, Fort Huachuca plays a major role in Arizona's economic health. With more than 10,000 (currently 10,226) military and civilian employees, it accounts for about one-third of the employment and 51 percent of the personal income of Cochise County where total annual employment is 31,850. It should be noted that employment generated by Fort Huachuca stretches outside of Cochise County to such areas as the City of Tucson. The analysis was focused on Cochise County since any potential effects of the proposed realignment would be focused on that area.

Of the major employers (those having more than 25 employees) in Sierra Vista, the Fort accounts for 77 percent of the employment, with the military personnel and their family members living on- and off-post making up about half of the population.

The employment of Huachuca City is closely tied to the military and industrial activity. This community is also experiencing an increase in both population and commercial growth due to the continuing development of Sierra Vista.

It is estimated that more than 50 percent of the military personnel reside on-post. Employment of both military and civilian personnel has grown steadily, but modestly during the last 10 years. The USAISC currently employs a total of 2,263 personnel. This includes 780 military personnel and 1,475 civilian personnel.

Economic Trends

In 1987, Cochise County had retail sales of \$329,854,000. Personal income during 1987 was just under \$1 billion. Annual per capita income in 1986 was \$9,952. The Federal Government is the major economic factor in the county. Total federal expenditures in 1987 were \$657,950,000 with \$421,251,000 expenditures from the Department of Defense. Total federal salaries in 1987 were \$285,221,000 with \$273,322,000 from the Department of Defense. Fort Huachuca accounted for almost all of the Department of Defense expenditures within Cochise County. These expenditures included salaries, purchases of materials and supplies, and other Department of Defense contracts for direct support of the facility.

Fort Huachuca is therefore both the major economic factor and employer within the county. The USAISC accounts for approximately \$82 million in salaries and \$40.5 million in other related expenditures. It should be noted that the higher wages paid to specialists in the USAISC and other groups account for a higher average salary rate than most other Army installations.

The City of Sierra Vista Corporate Boundaries include the Cantonment area of Fort Huachuca and will therefore be the most affected by any change in population or expenditures at the Fort. The city's 1988-89 budget was \$29.2 million, \$21.3 million operating budget and \$7.9 million from the locally generated expenditure limit. The locally generated operation budget includes property taxes, sales tax, and motel/hotel taxes. The 1989-90 budget is substantially reduced from the previous year due to decrease in revenues from a general decline in the economy of the state. As expenditure limits are primarily based on population increase, Sierra Vista has aggressively annexed unincorporated lands in order to rapidly increase population. The city includes those military personnel residing at Fort Huachuca within its population total for these expenditure limits.

Housing

Based on information supplied by the USAISC, there are 1,954 family housing units on-base, 266 bachelor officers quarters, and 2,699 barracks units. These figures include substandard, diverted, and transient quarters. Approximately 52.8 percent of the military personnel and no civilian personnel live on-base.

Off-base housing is generally plentiful within the City of Sierra Vista and the surrounding community. According to the City of Sierra Vista in 1989, there were 5,529 single family units, 2,890 multifamily units, and 1,740 mobile homes within the city limits. Based on information from the Los Angeles District Corps of Engineers, Arizona Real Estate Office, the average home price in Sierra Vista is between \$70,000 and 75,000. Approximately 20 percent of all units are under \$60,000; 50 percent between \$60,000-\$100,000 and 30 percent above \$100,000. It is estimated that 20 percent of USAISC's 788 military personnel and 75 percent of 1,475 civilian personnel are homeowners. USAISC also estimates that the average price of homes owned by its personnel is over \$90,000 reflecting the relatively high income of the personnel in this Command.

Schools

Two elementary and one intermediate schools are located at Fort Huachuca. These schools are General Meyers Elementary (K, 4, 5) with 550 students, Colonel Johnston Elementary (1,2,3) with 600 students, and Colonel Smith Intermediate (6,7,8) with 425 students. Almost all students attending these schools are military dependents.

There is no high school located on-post. All high school-aged military dependents living on-post attend high school off-post in Sierra Vista.

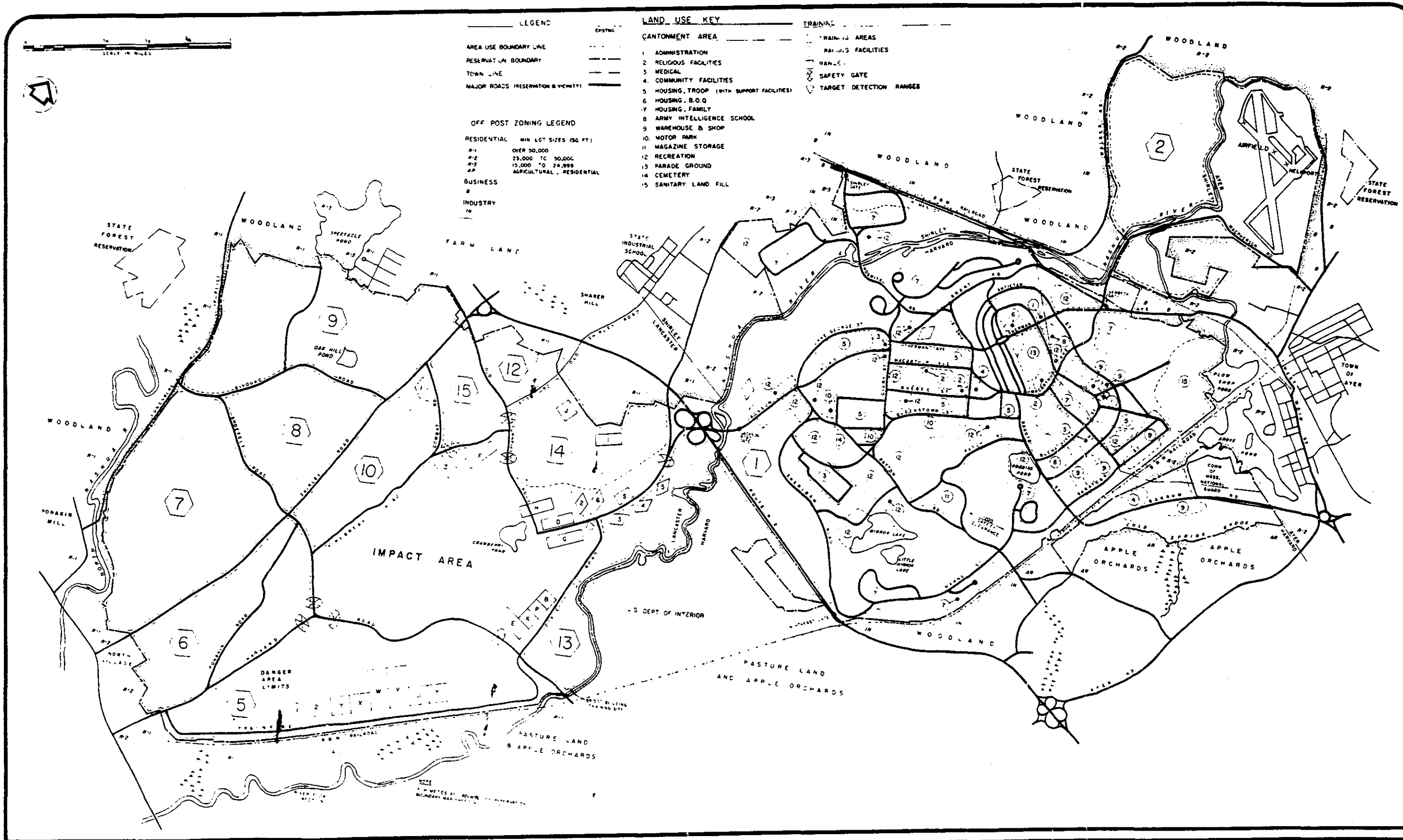
Table 3.3-1 documents the number of military and civilian dependents attending public schools off-base within the area. As shown in the table, the vast majority of military and civilian dependents attend school in Sierra Vista. The table also provides an estimate of PL-874 assistance provided each district

The Sierra Vista Public Schools educate the majority of off-post military and civilian dependents. With a current enrollment of 6,445, military and civilian dependents account directly for over half the enrollment.

Table 3.3-1

**NUMBER OF MILITARY AND CIVILIAN DEPENDENTS
ATTENDING OFF-POST SCHOOLS**

District	Number of Schools	Number of Military Dependents	Number of Civilian Dependents	PL-874 Assistance
Sierra Vista	8	1,538	1,928	\$633,029
Tombstone Unified	3	67	211	37,000
St. David Unified	1	14	0	0
Palominas	1	43	228	40,000
Sonoita	1	0	8	0
Patagonia No. 6	1	0	1	0
Patagonia No. 20	1	1	4	0
Sunnyside No. 12	17	0-5	10	*
Tucson Unified	104	12	0	*
* Districts unable to classify contribution from Fort Huachuca-related PL-874 Assistance.				



FORT DEVENS LAND USES

FIGURE
3.3-3

Of the four private grade schools in the area, the Shilo Christian School enrolls approximately 80 civilian and military dependents, the First Baptist Christian Academy enrolls 85 dependents and the Nova School 20 dependents. The Full Gospel Assembly School reports no military dependents enrolled.

Cochise College, a two-year community college, has an enrollment of 526 military and civilian dependents. University of Arizona Continuing Education has an enrollment of 154 dependents, and is reportedly considering additional offerings for the community. The private Golden Gate University and Chapman College have enrollments of 54 and 23 dependents, respectively.

3.3.2 Fort Devens

3.3.2.1 Land Use

Land utilization in the communities surrounding Fort Devens (Figure 3.3-3) included 71 percent open space in 1970 (latest year data available). This amount is expected to decline to 65 percent by 1995. The distribution of land by activity in 1970 was:

	<u>Acres</u>	<u>Percent</u>
Residential	26,470	9
Industrial	1,280	0.5
Commercial	1,390	0.5
Agricultural	19,020	7
Public	33,510	12
Vacant	<u>205,970</u>	<u>71</u>
Total	287,640	100

Of the 9,338 acres that contain Fort Devens, over 6,000 acres are used for training and 3,000 acres for housing (Figure 3.3-4), schools, and other facilities. These include nearly 1,200 buildings of which 689 are permanent and 509 are temporary (mostly barracks).

Fort Devens is the largest single land holding in the north central area of Massachusetts. The areas of forest, wetland, recreation land, and greenbelt within the boundaries of the military reserve constitute the largest single area of wildlife and natural land under a single management in that part of the state.

3.3.2.2 Population

In 1980, the Fort Devens area (Middlesex, Worcester, Suffolk Counties, Massachusetts and Hillsborough County, New Hampshire) had a population of 2,940,136. In 1985, the population in the area had grown to 2,977,390 for an increase of 1.2 percent. Population is expected to increase to 3,014,148 by 1990 for an increase of about 1.3 percent. Demographic data show the population to contain approximately 92 percent white. Fifty percent of the population is under 30 years old and about half the population was married as of 1980.

The number of people living on-post at Fort Devens has been estimated for the period of 1985 to 1990 to be approximately 9,700 to 12,000. In addition, there are approximately 4,000 additional military and civilian personnel at Fort Devens who live off-post. This means that the total daytime population at Fort Devens is between 13,000 and 15,400. This number varies from month to month depending on the number of reservists, military students, and dependents. The Fort also serves over 92,000 retired military personnel.

The current distribution of post population includes 6,000 military, 1,931 civilian and 7,205 military dependents for a total base population of 15,136. There are 3,030 (including 261 civilian, 1,095 military, and 1,674 student) personnel currently assigned to the Intelligence School (USAISD) whose positions would be transferred to Fort Huachuca. The average grade level of civilian personnel is GS-9 with an average age of 42 and 12 years of service.

3.3.2.3 Socioeconomic Activity

Employment

Total non-farm employment in the four-county region in 1986 was 2,124,908, of which approximately 88 percent was in the private sector. The industrial sectors with the highest employment levels were services at 38 percent, manufacturing with 20 percent and retail trade with 17 percent. This employment was distributed over 81,919 establishments. The unemployment for the region was 2.92 percent in 1988 which was far less than the national rate of 5.5 percent.

Economic Trends

Of the total non-farm income of \$49,807,676,000 in 1986 for the region, approximately 23 percent originated in the manufacturing sector and 8 percent came from the retail sector. Total federal, state, and local transfer payments to individuals amounted to \$7,090,266,000. Retirement and disability insurance accounted for approximately 48 percent of total transfer payments. Average per capita personal income was \$18,344.



FT. DEVENS CANTONMENT AREA

FIGURE
3.3-4

Fort Devens has economic effects on both the local community and state through wages and salaries that are generated on-base and through base expenditures for goods and services in the local community. Currently, military personnel receive \$191,388,894 and civilians receive \$92,364,231 annually in wages and salaries. The base expends \$110,118,000 annually in the local economy. In the eight-town area in the vicinity of the Fort, property taxes attributable to its personnel total approximately \$2,748,000 annually with the largest amounts being paid to the communities of Ayer and Fitchburg. It is estimated that net income generated by the Fort in Massachusetts results in \$7.6 million in tax revenue.

Total business volume in New England attributable to the Fort is estimated at \$437 million annually with an estimated 90 percent of this volume occurring within 45 miles. Based on ratios of business volume per employee, it is estimated that Fort Devens is currently responsible for nearly 11,126 civilian jobs in New England.

Housing

There are 1,723 on-base family housing units, 3,995 barracks spaces, and 600 temporary barracks spaces that are currently occupied by active duty personnel. Additionally, there are 1,104,216 housing units in the region with single-family homes being the most common type. Of these, 545,636, or about 49 percent were owner occupied. There were 5,062 units vacant (0.9 percent) and 511,925 rental units of which 26,837 (5 percent) were vacant. The boom in housing prices ended in 1987. Median sales prices rose slightly during the first quarter of 1987 to the first quarter of 1988, but have remained essentially flat since that time. The median price for a house in the Fort Devens area was \$129,000 in the first quarter of 1989.

Schools

There is one elementary school (grades K-3) with the capacity to teach 350-400 students and two child-care facilities with a capacity of 350 located on-base. Children enrolled here range from 6 weeks to 12 years. Additionally, 70 homes are certified to provide day care for up to six children each.

The four county area has a student enrollment of 464,043 distributed among 774 schools. These schools currently employ 23,889 teachers and expend \$1,410,853,000 annually. Annual expenditures are \$3,040 per student.

Of all the schools in the area, it is anticipated that base realignment will have the greatest effect on Ayer schools since on-post military dependents attend these schools. Ayer Public Schools were attended by 2,392 students in 1986 with about 70 percent being dependents of Fort Devens personnel. Ayer Public Schools have current entitlement estimated at \$4.2 million. Ayer has by far the largest contingent of military dependents in the area.

3.3.3 Fort Monmouth

3.3.3.1 Land Use

Fort Monmouth is situated on 1,356 acres of land (Figure 3.3-5) and is comprised of three separate areas. These include the main post (630 acres) (Figure 3.3-6), Charles Wood area (511 acres), and Evans area (215 acres). Most land at the Fort is devoted to recreation and open space (approximately 57 percent). Research, development, and testing comprise 14 percent of the area, while family housing occupies another 14 percent. The base contains a total of 778 buildings comprising 6,056,129 square feet of space.

The Fort Monmouth socioeconomic impact area is defined as the New Jersey counties of Monmouth, Middlesex, Ocean, and Union. The communities immediately surrounding Fort Monmouth are Eatontown, Red Bank, Shrewsbury, and Oceanport for a total combined area of 8,924 acres. Residential use comprises approximately 37 percent of the total land use in the area. Public land consists of town buildings and services, utilities, public parks, and waste disposal and comprises about 15 percent of the total land use. The wooded and vacant land grouping is composed of forests, open land, wetlands, and vacant lots.

3.3.3.2 Population

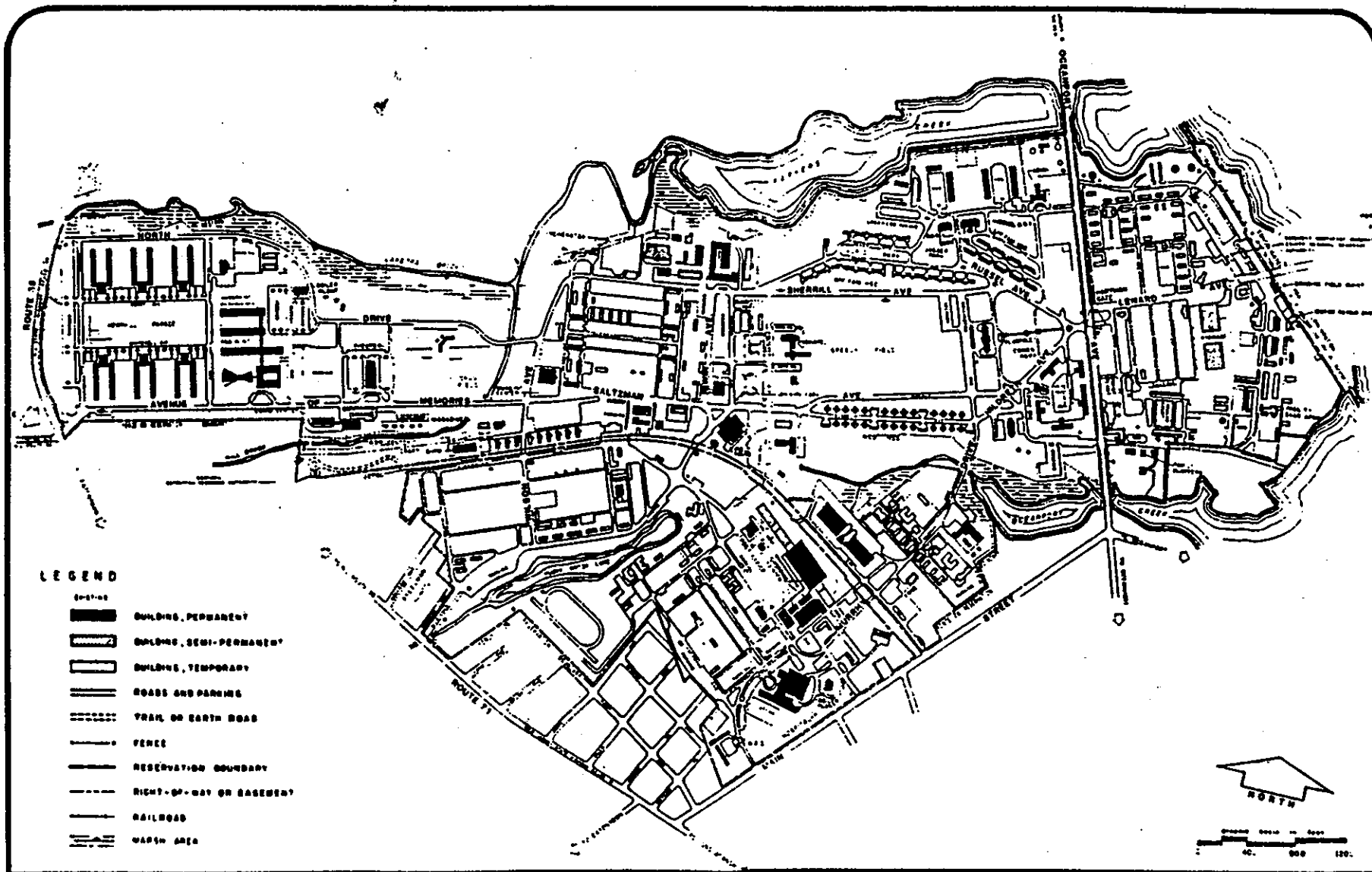
The four-county Fort Monmouth area had a total population of 1,949,198 in 1980. The demographic structure shows approximately 88 percent of the population is white with a median age of 33.3. Of the population over 15 years of age, approximately 58 percent are married.

The population at the Fort is 16,969. A large number of retired military personnel are served by the base. Currently, the number of retired military personnel is 10 times greater than the number of active military personnel.

3.3.3.3 Socioeconomic Activity

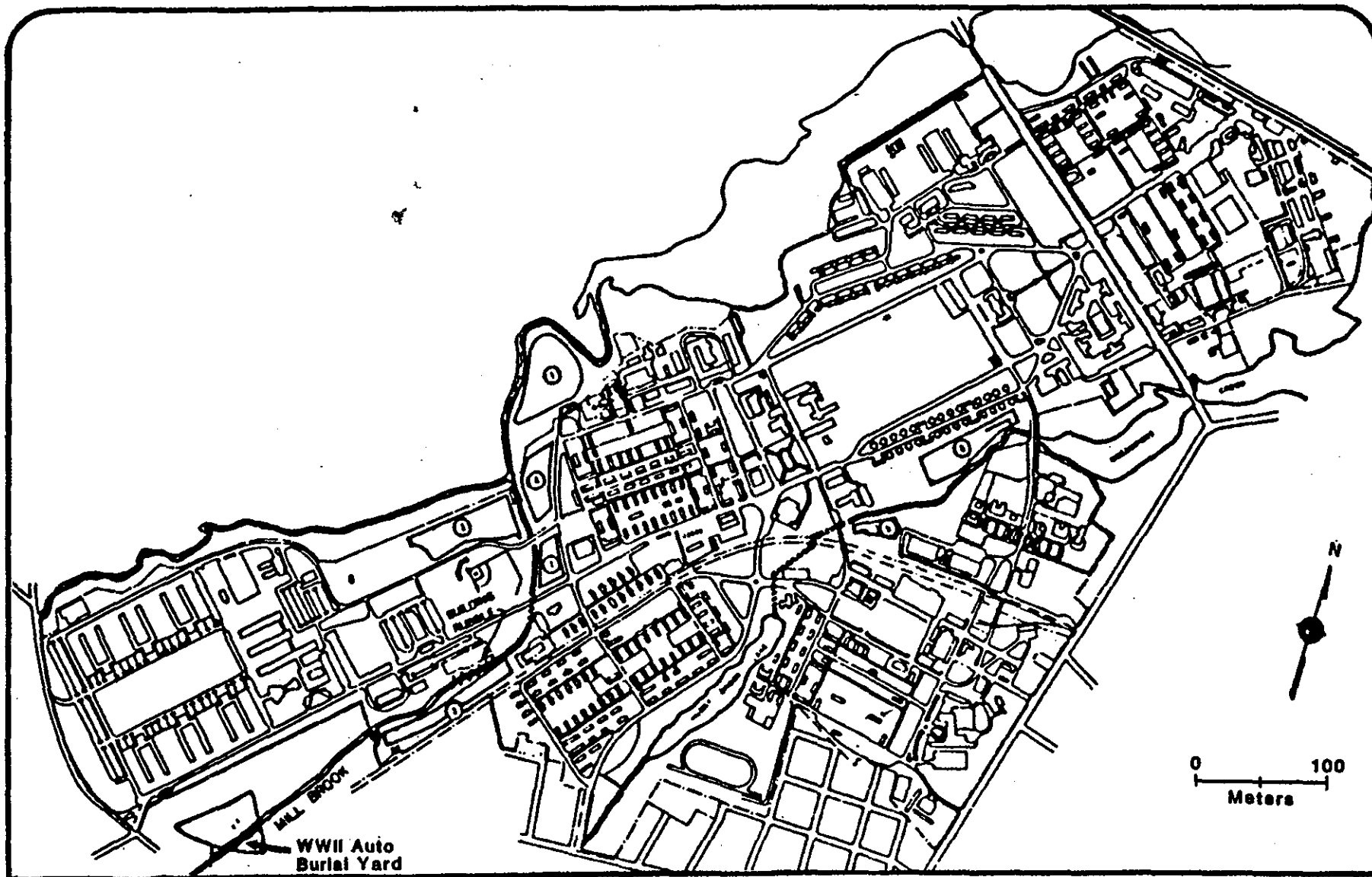
Employment

In 1986, the Fort Monmouth area had 1,081,678 people employed in non-farming industries. The service industry has the largest number of employees at 26 percent, followed by retail sales at 18 percent, manufacturing at 17 percent, and government at 13.5 percent. The private non-farm workers were distributed amongst a total of 53,357 establishments. The 1988 average unemployment rate for the area was 3.59 percent, which was 29 percent lower than the national rate of 5.5 percent.



FORT MONMOUTH LAND USES

FIGURE
3.3-5



FORT MONMOUTH CANTONMENT AREA

FIGURE
3.3-6

Economic Trends

Per capita income in 1986 for the Fort Monmouth area was \$19,406 which was approximately 33 percent more than the national average. Fort Monmouth is linked to Garrison and the surrounding communities by the wages and salaries that are generated on the base and through the base expenditures for goods and services in the local community. The 331 USAISC civilian personnel and 74 military personnel whose positions are scheduled to be realigned receive almost \$16.5 million in wages and salaries. The USAISC spends approximately \$37.6 million for goods and services in the local economy. The installation also has direct and indirect effects on the local business volume in the area, including effects on local population, number of schools and services required, and housing.

Total local government revenues for the Fort Monmouth area were approximately \$2.5 billion in 1982 with nearly 47 percent of this generated by property taxes. Almost 45 percent of expenditures were for education, with total revenues at about \$2.45 billion for the same year.

Housing

There are 1,145 family housing units in the three areas of Fort Monmouth and the occupancy rate is at 90 percent. Nearly 65 percent of these units are occupied by enlisted personnel.

In 1980, there were 706,572 housing units in the Fort Monmouth area, with about 34 percent of these units being rentals. The vacancy rate was 1.4 percent for owner-occupied units and 4.5 percent for rental units. In 1989, the Monmouth Realty Board indicated that the recent median price for house sales was \$178,000, and rents for two- and three-bedroom apartments ranged from \$700 to \$1,200.

Schools

Fort Monmouth has no schools on-base for military dependents. The surrounding area is comprised of 132 school districts with a total of 562 schools. The pupil-to-teacher ratio of almost 13:1 exceeds the national average. Almost 70 percent of the area high school seniors go to college. A child-care center is located on-base and is at 100 percent of its capacity of 240 children.

3.4 CULTURAL RESOURCES

3.4.1 Fort Huachuca

Fort Huachuca contains remnants of cultures spanning the last 10,000 years. Some of the oldest sites in North America have been located along the San Pedro River in close proximity to the Fort. Fort Huachuca was founded in 1877 to defend the area from Apache raids on ranchers and miners and to protect the American border. The "Old Post" section of the Fort is a National Historic Landmark and was designated as such in 1976. Two prehistoric sites that have been listed on the National Register of Historic Places are the Garden Canyon sites, a major Hohokam complex located at the mouth of Garden Canyon, and the Garden Canyon Pictograph site located at the head of the canyon.

In 1989, Statistical Research (SR) group completed a report on a sample survey of settlement trends in the middle San Pedro Valley of Fort Huachuca [Altschul and Jones, 1989]. This survey covered 8,900 acres of the 73,344-acre Fort and is the largest inventory of cultural resources completed at Fort Huachuca. The survey recorded 58 prehistoric sites that were divided into three functional categories: habitations, resources processing, and artifact scatters of unknown function. Also recorded were 31 historic sites that were divided in three categories: architectural, dumps, and scatters. Altschul and Jones [1989] created a model for the purpose of predicting favored prehistoric site locations. This model worked well for sites related to resource procurement, relatively well for habitation sites, and not so well for artifact scatters. The model also worked well in the bajada and canyon mouths but very poorly in the northwest quadrant of the base. The report states that "In the case of Fort Huachuca, predictive strength may be more a reflection of archaeological method than prehistoric behavior" [Altschul and Jones, 1989].

Although there are some limitations to survey sampling and predictive modeling, the authors made some important observations on locational patterns in prehistoric settlement at Fort Huachuca. Some of these observations are as follows [Altschul and Jones, 1989]:

- 1) All time periods from PaleoIndian through Protohistoric are represented by sites on-base with the largest number of components dating to the Formative Period.
- 2) A narrow band of the bajada adjacent to the San Pedro River was the scene of intense resource procurement. Processing of these resources appears to have taken place at hearths distributed throughout this zone. Habitation sites in this section of the bajada date to the Preclassic Period or are primarily Hohokam in nature. Classic Period habitation sites are more widely distributed throughout the bajada zone and are characterized by local ceramics.
- 3) The canyon mouths along the eastern flank of the Huachuca Mountains were favored locations for habitation sites. This pattern began at least by the Archaic and lasted through the Protohistoric Period. The pattern is strongest

in the Preclassic of the Formative Period with site location becoming more heterogenous during the Classic Period.

- 4) Settlement on the dissected alluvial fan remnants that drain the northern slope of the Huachuca Mountains is linear in nature. Habitation sites occur downstream from the canyon mouths, at points where the drainage systems widen out. Special-use sites are located upstream and downstream from the habitation sites. Site location in this area is difficult to predict because only certain drainages were settled, and those favored do not appear to be environmentally distinctive.

Altogether, approximately 12,000 acres (about 15 percent of the post) have been surveyed to date resulting in the recordation of many sites from the PaleoIndian to the Historic Period.

The SR survey identified seven sites as belonging to the Archaic, seven in the Formative, eight in the Classic, and five in the Protohistoric periods. Among the prehistoric sites, there were 14 classified as habitations, 16 as rock piles, one rock art, and 12 unknowns. The Historic period sites identified by SR included 20 with trash scatters, seven with trash dumps, 10 with architecture, and 14 with non-architectural features. Most of the Cantonment area proposed for new facility construction was surveyed by Ms. Marie Cottrell, Base Archaeologist. No surface manifestations of any prehistoric or historic sites were found during this survey. Proposed construction areas not yet surveyed will be prior to construction to determine any effects on cultural resources in compliance with Section 106 of the National Historic Preservation Act.

3.4.2 Fort Devens

Fort Devens is located in the interior uplands, north of the confluence of the Nashua River and its major tributary, the North Nashua River, an area with a rich diversity of natural resources and a high potential for prehistoric archaeological sites. Expected site types include small temporary camps and foraging stations, larger riverine base camps, rock shelters, fishweirs, and lithic quarries. Site occupation periods are expected to cover the last 10,000 years (PaleoIndian through European Contact periods). There has been no comprehensive inventory survey of the facility, yet three prehistoric sites have been reported at Fort Devens. A reconnaissance survey, based on background and visual site inspection, prepared for this EIS study (Fitch and Glover 1989) has stratified the Fort lands into zones of expected archaeological sensitivity.

The historic archaeological resource base may contain up to 127 sites, six of which have been identified in the field to date. Expected site types include a wide range of agriculturally-oriented farmstead structures as well as a variety of small-scale industrial complexes ranging from the earliest historic occupations (1700s) to the Army acquisition in 1917.

3.4.3 Fort Monmouth

Fort Monmouth is situated on the Outer Coastal Plain physiographic zone, which would have provided prehistoric hunter/gatherers from the PaleoIndian through European Contact periods (10,000 - 400 years before present) with the diverse coastal and estuarine resources of the Navesink River drainage basin. At Fort Monmouth (Main Post), evidence of prehistoric occupations has been reported along the marsh area at the southern edge of Parker's Creek, at Husky Brook Lake, and at four other locations. Based on analysis by Fitch and Glover (1989). Relatively undisturbed areas of Fort Monmouth are expected to have a moderately high archaeological sensitivity.

The potential historic archaeological resource base (non-military related) includes 13 properties or complexes representing residential farmstead dwellings, commercial structures, and features with Monmouth Park (racetrack). The non-military historic archaeological resource base has a low potential for survival due to more recent land disturbances.

Fort Monmouth was established by Congress in 1917 for use by the Signal Corps. Approximately 417 buildings, structures, and features exist at Fort Monmouth representing six temporal construction periods: Pre-military, World War I, Interwar, World War II, Mid-Twentieth Century, and Late Twentieth Century. One historic district has been recommended for listing in the National Register of Historic Places. The proposed Fort Monmouth Historic District contains 115 buildings, 97 of which were constructed between 1927 and 1937. The majority of these structures were constructed of brick following standardized plans and executed in a simple Georgian Revival style. One former building site is listed in the New Jersey State Register. The Hangar No. 1 Site is the site of a wood frame airplane hangar constructed in 1918 and used as a radio classroom in World War II. The hangar was demolished in 1950.

3.5 NOISE

3.5.1 Fort Huachuca

The principal noise sources which contribute to the noise environment at Fort Huachuca are weapons blasts, airfield activities, and vehicle traffic. A number of training exercises involve the use of small arms, artillery, tanks, and explosives. Noise contours computed for these activities indicate that unacceptable noise levels (Zones II and III) are contained within the Fort boundaries and outside of the Cantonment area. Contours for unacceptable airfield activity noise are also within Fort boundaries, north of the Cantonment area. An examination of traffic noise at the two streets, Irwin and Hatfield, in closest proximity to a majority of the proposed construction, indicates peak traffic noise levels of 65 and 67 dBA, respectively.

3.5.2 Fort Devens

Activities at Fort Devens which contribute to noise levels in the immediate area include land and air traffic and range activities. Training activities on the ranges use a variety of weapons including pistols, rifles, machine guns, grenade launchers, mortars, hand grenades, demolition, and anti-tank weapons. Large aircraft contribute to the noise level during low approaches to the Turner Drop Zone. Most of these activities take place on the South Post. Contours mapping unacceptable noise levels (Zones II and III) for these activities indicate that some areas outside the post boundaries are exposed to unacceptable noise levels.

Measurements of ambient noise levels were recorded at an enlisted housing area on the southeast boundary of the post. The calculated sound level (L_{eq}) was 46 dB(A).

EPA's long range goal for noise levels in residential areas is 55 dB(A). Therefore, the 46 dB(A) level is well below the standard.

3.5.3 Fort Monmouth

Noise is not a significant problem at Fort Monmouth since none of the potential sources including aircraft, weapons firing, or vehicle traffic, significantly contribute to the environmental noise level. Aircraft operations are limited to two to three helicopter movements per week, far from buildings and sensitive noise receptors. The only weapons firing is located indoors and traffic is limited to that associated with rush hour. There is a temporary noise increase when trains of the Central Railroad pass through the Charles Wood area.

3.6 TRAFFIC AND TRANSPORTATION

3.6.1 Fort Huachuca

Fort Huachuca and the surrounding communities are accessed from State Highway 90 which runs south from the junction of Interstate Highway 10 near Benson, Arizona. There are two entrances to the Fort off of Highway 90: the Main Gate and the East Gate. A series of surface streets serve the Cantonment area with speed limits of 15 to 35 miles per hour.

Libby Army Airfield, located north of the Cantonment area, supports military aircraft involved in test and training programs and troop movements. A portion of the facility serves as the City of Sierra Vista Municipal Airport providing limited public service. Major commercial air carriers are available in Tucson, Arizona. Bus service to Tucson is available twice daily. Amtrak provides rail service to Benson, Arizona, 30 miles north of Fort Huachuca by road.

3.6.2 Fort Devens

Fort Devens is accessible by Route 2 and Route 2A through the Jackson and Verbeck gates and by Route 111 through Barnum Gate. Route 2 is the primary artery connecting Fort Devens and Boston to the east and Leominster/Fitchburg to the west, and provides quick access to Interstates 95, 495, and 190. An average daily volume of 25,000 vehicles travel on surface streets on-post.

Commuter rail service is available in nearby Ayer and Shirley. Railroad freight transportation is provided in Ayer with a spur leading on-post which is used for movement of heavy equipment and some military vehicles. Moore Army Airfield provides air transportation to the base with commercial air carriers available at Fitchburg, Shirley, and Worcester City airports, and at Logan International Airport in Boston.

3.6.3 Fort Monmouth

The Garden State Parkway provides direct access to each of the three posts that make up Fort Monmouth. Surface streets on-post are predominately two-lane roads with speed limits between 15 and 35 mph. Only a limited amount of congestion and parking shortages occurs during peak periods.

Commuter bus service is available at the installation and in the surrounding communities. A municipal airport provides shuttle service to cities between Washington and Boston. Two Conrail stations providing service to New York City are located four miles away from the installation. The main post is within 0.5 mile of the New Jersey Transit Rail Station.

3.7 AESTHETICS AND RECREATION

3.7.1 Fort Huachuca

A number of aesthetic and recreational areas exist within Fort Huachuca and the surrounding communities. There are over 24,000 forested acres in the mountainous portions of the Fort which provide scenic beauty to residents and visitors in the area. Recreational activities on the installation include camping, picnicking, hiking, fishing, hunting, birdwatching, skeet and trap shooting, golf, bird dog field trials, and equestrian activities. All activities are open to active and retired military personnel and most are open to the general public.

Recreational facilities in the surrounding communities of Sierra Vista and Huachuca City include playground and picnic areas; basketball and tennis courts; baseball, softball, and soccer fields; and equestrian facilities. Additionally, numerous natural, scenic, and recreation areas are found in the region.

3.7.2 Fort Devens

The area around Fort Devens supports typical rural and small town New England landscapes with rolling hills, river valleys, and deciduous forests. The undeveloped areas on the installation are similar to these landscapes and offer excellent aesthetic value and the Cantonment area with its open quadrangles, ornamental landscapes, and historic brick buildings provides high aesthetic value. Industrial areas on-base are of low aesthetic value.

The installation maintains numerous indoor and outdoor recreational facilities for activities including basketball, football, softball, soccer, camping and picnicking, golf, skiing, and boating. Facilities are available to all active and retired Department of Defense employees and their dependents.

Numerous lakes and ponds, and 10 state forests and parks are located in the surrounding area offering picnicking, hiking, camping, fishing, ice skating, and additional activities. Indoor and outdoor racquetball and tennis courts are also available. Most recreational resources are utilized at or above their capacity.

3.7.3 Fort Monmouth

The Fort Monmouth region is on the Atlantic Coastal Plain which includes marine, estuarine, and deciduous forest environments. The Fort supports aesthetically pleasing areas along Parkers and Oceanport Creeks, and post areas are enhanced by the planting of trees, shrubs, and other ornamental vegetation.

Recreational facilities on-base include picnicking, golf, tennis courts, ball fields, basketball courts, weight rooms, and swimming pools. The surrounding area has beaches, state parks, amusement parks, and two stadiums providing entertainment and sporting events.

3.8 HAZARDOUS MATERIALS

3.8.1 Fort Huachuca

The use of toxic and hazardous materials was assessed in two installation assessments, one in 1979 and the other in 1987, and in a hazardous waste management survey conducted in 1988. These assessments indicate a number of sites potentially contaminated by hazardous materials and a number of cases of improper use and disposal of toxic and hazardous materials.

Areas of potential toxic and hazardous material contamination identified by the two installation assessments include the Fire-Fighter Training Area where waste fuels and solvents were poured onto the soils and burned; the Petroleum, Oils, and Lubricants Storage

Facility where fuel filters are backwashed with fuel into the storm drain system; fuel leaks from storage tanks at the Military Petroleum, Oils, and Lubricants Filling Station and at the Post Exchange Service Station; and two historically used landfills where unknown amounts of materials were disposed. In addition to these sites, the east range mineshaft and the Libby Army Airfield washrack have been identified as potentially contaminated sites. Site assessments are being performed.

3.8.2 Fort Devens

3.8.2.1 Hazardous Materials Inventory and Management

On February 21, 1990, Fort Devens and the Sudbury Training Annex were listed on the EPA Superfund National Priorities List (NPL) for hazardous waste sites. Information on hazardous materials at Fort Devens in this section is from two reports prepared by the United States Army Toxic and Hazardous Materials Agency (USATHAMA): "Installation Assessment of Headquarters Fort Devens, Report No. 326" completed in August 1982 and the "Installation Restoration Program Plan for Fort Devens" dated March 1989. Additional information is from the "Environmental Impact Statement, On-going Mission Activities, Fort Devens, Massachusetts" revised in October, 1987, and from other reports and personal contacts as cited.

A number of the Army units, subordinate directorates, and tenants at Fort Devens are listed in the 1982 Installation Assessment as organizations which produce, handle, or dispose of toxic/hazardous materials. This list includes the Army Intelligence School, which is affected by the realignment. Their involvement with hazardous materials is very minor, however, resulting from an incinerator used to destroy classified documents [USATHAMA, 1982] and photographic processing chemicals (personal communication, S. Hopkins, DEH-Fort Devens, August 1989).

Hazardous and toxic wastes at Fort Devens are generated mostly through routine maintenance operations, elimination of materials with expired shelf lives, spill cleanup, and process operations [FORSCOM, 1987]. No major industrial operations are conducted at the installation. Several small scale industrial type operations are performed, primarily by the Directorate of Logistics, the Directorate of Plans, Training, Mobilization and Security, and the Directorate of Engineering and Housing. These small-scale industrial-type operations are located throughout the installation and consist of vehicle maintenance, painting, aircraft maintenance, training aids manufacture, photographic operations, and printing. The largest of these operations is vehicle maintenance. Hazardous materials generated from vehicle and aircraft maintenance operations include waste battery acid, waste oils, antifreeze, solvents, caustic radiator cleaning solution, hydraulic fluid, fuel, methyl ethyl ketone, and paint thinners. Photographic operations generate waste fixer and waste developer. Printing operations produce waste solvent [USATHAMA, 1982].

Hazardous materials are also generated through laboratory operations. Laboratories on the installation include: a clinical chemistry laboratory at the Cutler Army Hospital (Bldg. 6851) which uses or generates xylene, toluene, acetone, methanol, nitric acid, and biological and pathogenic wastes which are incinerated; two dental facilities (Buildings 2283 and 2729) which generate gold scrap, amalgam, and spent x-ray solution; and a Preventive Medicine laboratory which performs routine chemical and biological testing, but does not generate any significant amounts of hazardous waste [USATHAMA, 1982].

Hazardous and toxic materials at Fort Devens are handled and stored in compliance with federal and state hazardous waste regulations. Fort Devens is authorized to store hazardous waste in Building 1650 and has been issued an EPA Identification Number and a Massachusetts Hazardous Waste License Number pursuant to Mass. General Law Chapter 21C and 310 CMR 30.000. Disposal is handled under a blanket contract through the Defense Reutilization Marketing Office (DRMO) [FORSCOM, 1987].

3.8.2.2 PCBs

PCB-containing transformers have been in use and are currently in use at Fort Devens. A survey of in-service transformers was conducted by the Facility Engineering Support Activity (located in Aberdeen, Md.) in April 1982. At that time, the transformers were inspected for leaks and labeled as to whether they were PCB-containing transformers or non-PCB-containing transformers. Approximately 900 transformers were in service at that time, and approximately 100 were labeled as PCB containing (above 500 ppm) [FORSCOM, 1987]. All known PCB transformers (above 500 ppm) have been removed except for two transformers (1-1000 KVA at Cutler Army Hospital and 1-5000 KVA Substation). A contract is being awarded for the removal of the transformer at the hospital. Mineral oil transformers on poles are tested as they are removed for PCB content and labeled and handled according to the test results (S. Hopkins, Environmental Management Office, DEH, Fort Devens, personal communication, 1989).

Out-of-service transformers are removed from their service location and are stored in the Hazardous Waste Warehouse (Building 1650) at DEH. This hazardous waste storage facility meets EPA criteria. PCB-containing transformers are stored on a concrete pad surrounded by a 6-inch continuous curbing. This storage area meets the EPA criteria for a PCB storage area. Transformers located in this area are inspected for leaks on a monthly basis. When a sufficient number of these items have accumulated, a service contract is awarded through the DRMO for their removal. The Fort Devens Department of Engineering and Housing prepared an annual report on PCB activities to keep on record at the installation [FORSCOM, 1987].

3.8.2.3 Asbestos

General Programs

Fort Devens has established an asbestos control program in compliance with Army, Occupational Safety and Health Administration (OSHA), Environmental Protection Agency (EPA), and Commonwealth of Massachusetts, Department of Environmental Protection regulations regarding the handling of asbestos. This standard operating procedure is followed when Fort Devens personnel are involved in asbestos related activities. The program is also applicable to any work performed under contracts issued by Fort Devens [FORSCOM, 1987].

Asbestos is removed prior to building demolition according to Federal and State regulations. At present, properly bagged and labeled asbestos material is disposed of at the Fort Devens sanitary landfill [FORSCOM, 1987]. Following closure of the landfill in 1991 asbestos disposal will be handled by a contractor. An operation and maintenance plan for management of asbestos is programmed for development in 1990 (personal communication, Mr. Joe Pierce, Fort Devens, DEH, August 1989).

Construction Impact Area Buildings

A survey of buildings at Fort Devens for asbestos materials was conducted in 1987 [HUB Testing Laboratories, 1987]. This survey revealed that a number of the buildings in the 2600 area which will be demolished to construct a new Information Systems Facility contained asbestos. Asbestos is contained around furnace tanks, mechanical room tanks and in other locations within the buildings. The asbestos is of two types, chrysotile and amosite, and content ranges from 10 to 70 percent. Asbestos in these buildings will be removed prior to demolition in conformance with Federal and State regulations.

3.8.2.4 Underground Storage Tanks

General Programs

The Fort Devens facility has over 300 underground storage tanks ranging in size from 250 to 25,000-gallon capacity. A number of abandoned tanks have been removed. The tanks contain the following substances: diesel fuel, waste oil, MOGas (military gasoline), kerosene, fuel oil, AV gas (Aviation gas) and JP fuel (Jet propulsion fuel). Most of the tanks contain fuel oil for local heating. These tanks have been registered with the Commonwealth of Massachusetts Department of Public Safety, Division of Fire Prevention, and filed with the Fort Devens Fire Department which has jurisdiction over the storage facility as per Massachusetts Board of Fire Prevention Regulation 527 CMR 9.00, February 1, 1986 [FORSCOM, 1987].

2600 Area Buildings

A number of underground storage tanks are associated with the 2600 area buildings which will be demolished for new construction associated with the base realignment. Buildings 2636, 2640, 2644, 2647, 2648, 2649, 2650, 2651, 2659, 2660, 2661 and 2662 have 1,000 gallon underground storage tanks. All of these contain No. 2 fuel oil, are constructed of steel, and are at least 25 years old. Buildings 2630, 2637, 2639, 2642, 2645, 2652, 2658, 2664, and 2665 use natural gas and have no oil storage tanks (personal communication, S. Bedard, Engineering Plans and Services, DEH, Ft. Devens, August 1989). Buildings with gas heat were converted from coal to gas in August 1966. When these buildings are demolished, the underground storage tanks will be removed and handled according to RCRA Underground Storage Tank regulations (40 CFR Part 280) and Massachusetts State Regulations for Closure of Underground Fuel Oil Tanks (527 CMR 9). The removal process is overviewed by Ft. Devens Environmental Management Office for regulatory compliance (personal communication, T. Pryor, Environmental Management Office, DEH, Ft. Devens, August 1989).

During the construction of Building P-2602, also located in the 2600 Area, four out of ten tanks removed during construction were found to have leaked causing contamination of soils with No. 2 oil. Samples of the contaminated soils revealed levels of oil between 400-1000 ppm. This is below the 1800 ppm level of hazardous waste and is considered virgin contaminated soil which can be landfilled. The remaining tanks in the 2600 Area are of similar age and it is presumed that a similar number will have leaked (personal communication, Mr. Pierce, Fort Devens Environmental Office, September 1989). Therefore, during Advanced Engineering and Design and construction, plans must be developed to deal with this potential contamination.

3.8.2.5 Oil and Hazardous Material Spill Plans

Fort Devens has a Spill Prevention Control and Counter-measure Plan (SPCC) and Installation Spill Contingency Plan (ISCP) for the storage and use of oil and hazardous materials. The ISCP is currently being updated (personal communication, J. Pierce, Chief, Environmental Management, DEH, Ft. Devens, August, 1989). The two plans identify storage locations, spill preventive measures and contingency plans for mitigating spills and include an updated inventory of hazardous materials used and stored at Fort Devens. The updated SPCC and ISCP have helped establish methods to minimize any impact from the use and storage of oil and hazardous materials and have identified methods to upgrade existing facilities to prevent future impact.

3.8.2.6 Contaminated Sites

On February 21, 1990, Fort Devens and the Sudbury Training Annex (Sudbury Training Annex will not be affected by the proposed realignment) were listed on the EPA Superfund National Priorities List for hazardous waste sites. EPA has recorded 46 potential

hazardous waste sites on Fort Devens including: the 15-acre Explosive Ordnance Disposal (EOD) range (on the South Post), where explosives and unusable munitions have been detonated or burned in open unlined pits since 1979; the 50-acre sanitary landfill (in the cantonment area), where household wastes, military refuse, asbestos, construction debris, waste oil, and incinerator ash have been dumped since the 1930s; and Building 1650, where battery acids, PCBs, pesticides, and solvents have been stored.

Monitoring wells near the sanitary landfill contain cadmium, lead, mercury, iron, and arsenic according to tests conducted in 1987 by an Army contractor. An estimated 21,700 Fort Devens employees and Ayer residents obtain drinking water from wells within 3 miles of the landfill; a Fort Devens well is 1,670 feet from the sanitary landfill. The 1987 tests also found arsenic, chromium, nickel, and lead in surface water near the sanitary landfill [EPA, 1989].

Contamination on these sites will be addressed according to procedures set forth in the Installation Restoration Program (IRP) Plan for Fort Devens prepared by USATHAMA [1989]. USATHAMA is responsible for the identification, control, and/or elimination of migration of existing or potential contamination resulting from past installation activities. The IRP process was developed to accomplish these responsibilities. Conceptually, the IRP is subdivided into three major phases which closely correspond in name and substance to the procedures established under CERCLA. These are: Preliminary Assessment/Site Inspection (PA/SI), Remedial Investigation/Feasibility Study (RI/FS), and Remedial Action. The purpose of the IRP Plan is to detail the technical and managerial approach to be used in addressing contamination at the site [USATHAMA, 1989]. This plan was prepared independently of the hazard ranking and proposal for listing on the National Priorities List by EPA.

The EPA Superfund Section overviews this entire process under an Interagency Agreement (personal communication, M. O'Donnel, EPA, August 1989). Remedial Action, if warranted, is scheduled to begin in early 1993 [USATHAMA, 1989].

3.8.3 Fort Monmouth

Hazardous materials used and/or generated at Fort Monmouth include chemicals for metal plating, photoprocessing chemicals, pesticides, radioactive material, and PCB transformers. The Fort provides proper use, storage, and disposal of these materials. Some buildings on-base contain asbestos which is removed on a case-by-case basis and there are a number of underground storage tanks used for various fuels.

Installation assessments conducted in 1980 and 1988 indicate that landfills on-base have minimal effects to ground and surface waters in the area, but recommend continued monitoring.

3.9 UTILITIES AND PUBLIC SERVICES

3.9.1 Fort Huachuca

3.9.1.1 Water Supply

Water is supplied to the Fort primarily from a series of six wells north of the main gate and two wells on the East Range. Existing demand is approximately 4.2 million gallons per day (mgd), with the wells on the Fort capable of providing about 5.4 mgd.

Water is supplied to the communities surrounding Fort Huachuca from deep wells accessing groundwater and supplied to Sierra Vista through eight independent water companies. Water is supplied to Huachuca City from wells operated by the city.

3.9.1.2 Wastewater Facilities

Wastewater is collected through a gravity waterborne sanitary sewer system into a sewage treatment plant located on-base and is adequate for a population of 15,000. A portion of the treated effluent is used for irrigation of the golf course and Chaffee Parade Field. Remaining effluent is discharged to an evaporation ponding area on the East Range.

Both Sierra Vista and Huachuca City utilize stabilization ponds or lagoons and Sierra Vista uses the effluent for irrigation. Treatment facilities are adequate through the year 2000. Approximately 600 homes in Sierra Vista use septic tanks and leach fields for wastewater disposal.

3.9.1.3 Natural Gas and Electricity

Natural gas is supplied by Southwest Gas Company and is distributed on the Fort through a series of steel or polyethylene transmission lines. A transmission line connects to a main in Benson, Arizona, providing gas to Huachuca City with branches to Sierra Vista and Fort Huachuca.

Tucson Electric Company furnishes electrical power to the Fort through overhead transmission lines. Tucson Electric has a considerable surplus of electrical energy and does not anticipate near-term shortages.

Electrical power to the surrounding area is supplied by the Arizona Electric Power Cooperative (AEP CO) which is a generation and transmission unit selling electricity to local distribution cooperatives.

3.9.1.4 Solid Waste Disposal

Fort Huachuca participates in a regional landfill located near Huachuca City. Regional users generate approximately 48,000 tons per year. The current projected lifespan of the landfill is four years. A recycling facility is currently proposed by a private company to be located at the landfill site.

3.9.1.5 Public Services and Safety

Two structural fire stations and one aircraft crash rescue station serve Fort Huachuca. About 500 fire hydrants are in built-up areas of the base. The woodland and range areas are regularly patrolled and, during peak fire season, 24-hour surveillance is maintained by the U.S. Forest Service lookout station on Miller Peak. The Fort maintains a mutual assistance agreement for fire protection with the U.S. Forest Service, Cochise County and the City of Sierra Vista.

The cities surrounding the base are served by the Sierra Vista Fire Department, the Fry Fire Department, and the Huachuca City Fire Department.

Police and security services at Fort Huachuca are provided by both military police and civilian security personnel. The Raymond W. Bliss Army Hospital, located on the Fort, serves as a complete medical facility for the base.

The communities surrounding Fort Huachuca are served by the Sierra Vista and Huachuca City Police Departments, Cochise County Sheriff's Department, and the Arizona Department of Public Safety. Surrounding areas are also served by the Sierra Vista Community Hospital and Ramsy Canyon Hospital and Treatment Center.

3.9.2 Fort Devens

3.9.2.1 Water Supply

Water for Fort Devens is produced by a network of four groundwater wells located on-base. Two of these wells provide 95 percent of the potable water. The other two are used during the year when the primary wells are shut down for maintenance.

The surrounding areas receive their potable water from wells, ponds, or reservoirs.

3.9.2.2 Wastewater Facilities

The base wastewater treatment facility is designed to serve a population of 30,000 and presently serves about 10,000. The average wastewater flow per day is about 1.3 mgd. Built in 1942, the system has experienced some infiltration/inflow problems in the sanitary

sewer in recent years. The wastewater treatment system, consisting of Imhoff tanks and infiltration beds, discharges effluent into settling basins for percolation into groundwater aquifers. There is no discharge into surface waters. Consequently, the provisions of the Clean Water Act do not require a NPDES permit. This system does require a Massachusetts Ground Water Discharge Permit. The nitrate levels in the discharge are currently above the levels authorized. Fort Devens is in the process of getting a variance from the Massachusetts Ground Water Discharge Permit (314 CMR 5.0), but the draft permit is still being discussed. The variance would redesignate the aquifer from a Class I to a Class II aquifer.

Nine wastewater treatment facilities along the Nashua River serve the region. All discharge into the Nashua River except for one which discharges into the groundwater. These facilities have decreased the nutrient loading into the Nashua River in an effort to improve the water quality of the river.

3.9.2.3 Natural Gas and Electricity

The base owns, operates and maintains all utility distribution systems with the exception of 50 percent of the high pressure gas lines. All energy and fuel used are purchased from local utility companies and vendors. The base has been able to justify and fund new projects as a result of energy conservation and energy savings programs. Boilers on the base consume Nos. 2 and 4 heating oils and are in compliance with Massachusetts standards.

3.9.2.4 Solid Waste Disposal

Solid wastes generated at Fort Devens are disposed of at the base's sanitary landfill. Approximately 75 out of 90 acres are already filled. Approximately 7,400 tons of solid waste are disposed of monthly and a composting facility processes about 2,000 tons of compost per year. Plans are to close the landfill by December 1991. The groundwater table sits about 20-35 feet below the ground surface. Although at least five feet of soil is left between the trench bottom and groundwater table, groundwater contamination from leachate infiltration is possible.

Fort Devens is preparing a service contract for refuse disposal that will decrease the amount of waste going into the landfill during the closure period, and is in the process of selecting an alternate waste disposal facility for use after December 1991.

Most of the landfills in the surrounding areas have been capped or are presently being capped, requiring the towns to hire waste transportation contractors to transport the solid waste to resource recovery facilities or other landfills.

3.9.2.5 Public Services and Safety

The base operates its own police and fire services. Organized under the Provost Marshalls Office, which is the liaison between the post and surrounding communities, the military police are responsible for security, law enforcement, and traffic control. Fort Devens also provides services for air, ground, and underwater search and rescue missions and provides explosive ordnance disposal to the New England area.

The Cutler Army Community Hospital serves the base and is undergoing modernization. The facility is expected to absorb retirees previously handled by Pease Air Force Base and Newport Naval Hospital which are being closed or scaled down.

Surrounding areas all operate their own police and fire departments. The local and base fire departments have mutual support agreements with each other. Four community hospitals are located within 20 minutes of the base. The region is well known for its health care services.

3.9.3 Fort Monmouth

3.9.3.1 Water Supply

Potable water used at the Main Post and Charles Wood area is purchased from the New Jersey American Water Company in Tinton Falls, New Jersey. The Evans area water is purchased from the Wall Township Water Sewer Utility Department. Combined demand was 0.7 million gpd in 1982 and there is no limitation on water supplied to these installations. The systems at the Main Post and Charles Wood areas are old and are subject to frequent breaks and leaks.

The surrounding area purchases potable water from either the New Jersey American Water Company which utilizes two local reservoirs for their supply or the Wall Township Water Sewer Utility Department which is supplied from a system of deep wells.

3.9.3.2 Wastewater Facilities

The Main Post and Charles Wood area wastewater is conducted to the Northeast Monmouth County Regional Sewerage Authority Treatment Plant in Monmouth Beach on the Shrewsbury River. The average combined flow is approximately 696,000 gallons per day. By contract, the combined sewage contribution is limited to 3.6 mgd. Sewage collected from the Evans area is conducted to the Southern Monmouth County Regional Sewerage Authority which has sufficient excess capacity for growth. Both plants provide secondary treatment averaging 90 to 95 percent removal with effluent dewatered and gravity-discharged to the Atlantic Ocean.

Most of the wastewater from Monmouth County is collected and conducted to regional wastewater treatment facilities such as those operated by the Northeast Monmouth County Regional Sewerage Authority Treatment Plant and the Southern Monmouth County Regional Sewerage Authority.

3.9.3.3 Natural Gas and Electricity

Fort Monmouth purchases all utilities and fuels from local utility companies and vendors. The government owns the distribution systems and storage facilities used in the consumption process. The installation has been able to finance improvements to existing facilities with funds raised through energy conservation programs. Three central heating plants produce steam for heating; they consume Nos. 2 and 6 heating oils and are in compliance with New Jersey state emissions requirements.

3.9.3.4 Solid Waste Disposal

Solid waste at Fort Monmouth is collected by a private contractor and disposed of at the Monmouth Reclamation Center landfill in Tinton Falls. Average volume is approximately 111,300 cubic yards of uncompacted waste. An on-site incinerator disposes about 4,000 cubic yards of wastes, most of which are generated by the hospital.

The surrounding areas also transport their waste to the Monmouth Reclamation Center landfill. A mandate in Monmouth County requires that each town manage and recycle at least three items. Tinton Falls has reduced their solid waste going to the county landfill by 50 percent through this program which was supported by State grants.

3.9.3.5 Public Services and Safety

Security and law enforcement are performed by both active duty Military Police who provide gate and perimeter security, traffic control, and law enforcement, and Department of Defense guards who provide on-base security. Fire protection on Fort Monmouth is provided by three stations all equipped with modern equipment. Patterson Army Hospital is located on the Main Post with a capacity of 100 beds and a dental facility which is currently being expanded.

The Fort Monmouth fire department has mutual support agreements with the surrounding areas. Local public safety is provided by the individual communities. The Fort Monmouth area has 30 hospitals with over 9,000 beds for a rate of 453 beds per 100,000 population.

This page is left intentionally blank.

SECTION 4 - ENVIRONMENTAL CONSEQUENCES

This section provides the analysis of the impacts of the proposed action and alternatives to the proposed action. Additionally, environmental mitigation measures and commitments are outlined for each identified significant impact. Due to the similarities in impacts of the proposed project and the potential alternatives to the proposed project, impacts for all alternatives are addressed for each facility within each issue area.

4.1 PHYSICAL ENVIRONMENT

4.1.1 Fort Huachuca

4.1.1.1 Air Quality

The realignment of the USAISD to Fort Huachuca and concurrent relocation of the USAISC to Fort Devens will not create any long-term significant impacts to the existing air quality. These activities will not directly create any adverse emission-producing facilities capable of significantly degrading air quality (i.e., large fossil-fuel burning facilities).

The realignment action will result in a slight increase in the total number of personnel at Fort Huachuca. However, an increase in private vehicles is not expected since the new students will likely use fewer personal vehicles than current military and civilian personnel. Therefore, the amount of emissions from personal vehicles is not expected to increase significantly.

Short-term increases in particulate matter and vehicle emissions will occur during facility construction and renovation. However, use of standard dust control measures should reduce this potentially significant impact. These measures include maintenance and use of low sulphur fuels in construction equipment, frequent dust control watering, and termination of construction during windy conditions.

Increased training activities on the ranges will create adverse impacts associated with vehicular emissions and dust, but as this is dispersed over a wide area it is not considered to be significant.

Implementation or construction of other alternatives to the proposed action would have comparable and also nonsignificant impacts.

No mitigation is required; however, the following procedures will be followed during construction:

- o Careful tuning of heavy construction equipment to reduce combustion source air emissions.
- o Control of diesel fuel quality (low sulfur content).
- o Frequent watering of the construction area to limit dust emissions.
- o Provisions for terminating construction activities during periods of high wind conditions.

4.1.1.2 Hydrology and Water Quality

Implementation of the proposed realignment of Fort Huachuca will increase water consumption as discussed in Section 4.9.1.1. This additional increase in water use is not expected to create a significant impact on groundwater resources.

The quality of water at Fort Huachuca is very good. Only minor chlorination is required prior to distribution. The realignment actions proposed will not contribute to any significant reduction in this level of water quality. No appreciable increases in potentially water contaminating toxic/hazardous materials are expected. While the approximate eight percent increase in Post personnel will correspondingly increase the production of wastes (sewage and solid wastes), adequate facilities exist to handle these wastes and prevent possible contamination to the water supply.

Storm runoff will increase due to construction of new facilities on currently undeveloped areas. This runoff could cause increased erosion and add to the flooding potential. Proper engineering design of drainage facilities would reduce the increased potential for erosion and flooding to nonsignificant levels.

Engineering of drainage facilities has been designed into every construction project to reduce the potential for erosion and flooding. The utilities upgrade includes addition of runoff containment structures and storm drains to ensure that existing washes and the storm drain system will be adequate to provide flood protection during a major storm.

Construction activities within the Cantonment area will have the potential to create erosion related impacts if heavy rains such as summer thundershowers occur. Additionally, the creation of impervious surfaces will increase water runoff from the construction site. Due to the small area involved and the infrequency of rain, this impact is not considered significant. Construction specifications will require that measures be taken to minimize such adverse impacts during construction of new facilities.

Increased activities on the ranges associated with the Intelligence School also have a potential to increase erosion on dirt roadways, pads and trails. Although adverse, this impact is not considered significant since the areas where vegetation will be removed are small and scattered.

Although no significant hydrology/water quality problems are anticipated, to insure adequate supply and quality of water, close monitoring of the water table and chemical testing of the water is being conducted on a continual basis by the installation.

Implementation and construction alternatives would not result in any significant impact to hydrological resources.

4.1.1.3 Geology

The proposed realignment action at Fort Huachuca will utilize approximately 800,000 square feet of undeveloped land for new structures, with an additional 81,667 square feet for the Signal Intelligence/Electronic Warfare Tactical Training Area, 650,000 square feet for the parade field, and approximately 1.5 million square feet for the Outdoor Sports Complex. The Utilities/Roads Upgrade will also involve undeveloped land. These construction projects will involve extensive grading and trenching. A detailed geological study would be required to determine design criteria for foundation and slope stability. Assuming these procedures, no significant impact is anticipated on earth resources.

The State of Arizona is classified as a Zone IIB area by the National Oceanic and Atmospheric Administration, with a potential for a magnitude 7.0 earthquake. Potential damage to the proposed new facilities could result if severe groundshaking occurred, causing a significant impact. Use of proper engineering design will reduce the potential impact to nonsignificant levels.

A detailed geotechnical study has been conducted for each construction project to determine parameters for foundation and slope design. As a result, use of proper foundation material is designated for the TTA/TTD applied instruction building to provide adequate site stability and drainage.

Facilities and structures have been designed to withstand groundshaking associated with a 7.0 Richter magnitude earthquake.

Alternatives to the proposed action would also have similar impacts to the proposed action. Proper engineering design after detailed study would be required for these alternatives.

4.1.2 Fort Devens

4.1.2.1 Air Quality

The shift in composition of the Fort Devens work force to more civilians and less military personnel will result in more individuals living off-post and commuting to work. It is anticipated that following the realignment there will be approximately an additional 2,000 cars per day travelling to, from, and within Fort Devens. This increase in vehicular emissions is not expected to significantly impact the air quality. Air quality in the airshed is not approaching any thresholds where impacts would be expected from increases in emissions.

The air quality on-post may be affected by the increase in vehicular traffic due to the increase of personnel commuting to work. This increase in vehicular emissions is not expected to significantly impact the air quality on-post or in the surrounding area.

There is no expected increase in the burning of fossil fuels, incineration, volatile/halogenated organic compound usage, volatile organic material storage, or manufacturing due to the realignment.

The demolition of the 21 existing World War II buildings and appurtenant structures may impact the air quality at the installation temporarily by releasing particulates and creating fugitive dust emissions, but this impact is temporary and not considered significant.

4.1.2.2 Hydrology and Water Quality

The proposed realignment is not expected to impact the Nashua River Basin or any wetlands, ponds, streams or brooks in the area surrounding Fort Devens because of the minimal effect of the realignment on population.

The increase in Fort Devens personnel living off-post would not significantly increase the demand for drinking water in the surrounding towns, as new housing construction is anticipated not to exceed approximately 400 units.

No water resources on-post, including the Nashua River, Plow Shop Pond, Grove Pond, Robbins Pond, Mirror Lake, Little Hell Pond, Cranberry Pond, Oak Hill Pond, Rock Pond, and groundwater resources are expected to be impacted by the realignment. Construction of new impervious surface area in the form of impervious paved roadway improvements and buildings would not result in impacts to surface water quality due to increased surface runoff. The total increase in impervious area is small, amounting to just over two acres. In addition, demolition of 21 existing barracks buildings will help to reduce the net quantity of impervious area and most of the soils at the installation are well-drained, further reducing runoff potential.

The decrease in the amount of personnel living on-post will result in a decrease in the demand for drinking water.

The construction of the approximately 54,000-square-foot parking facilities for Buildings P-12 and P-13 will not impact the small wetland area near MacArthur Avenue as long as the parking area does not extend into the wetland, and erosion control procedures are implemented during construction, such as the placement of hay bales and silt curtains along the edges of the construction site to prevent silt or sediment from running off-site into the wetland.

4.1.2.3 Geology

No impacts to geological resources are anticipated due to implementation of the proposed alignment as well as its implementation alternatives.

4.1.3 Fort Monmouth

4.1.3.1 Air Quality

The transfer of USAISC positions to Fort Devens will have no impact to the regional air resources.

The vehicle traffic on-post should decrease due to the transfer of USAISC to Fort Devens, thereby slightly reducing the amount of vehicle emissions to the air.

There may be a slight reduction in the burning of fossil fuels if the Army Materials Command moves from the temporary WWII buildings into Squier Hall.

No changes in incineration, volatile/halogenated organic compound usage, volatile organic material storage, or manufacturing are expected due to the realignment.

The demolition of the wooden temporary World War II buildings may slightly impact the air quality at the Installation temporarily by releasing particulates and creating fugitive dust emissions, but this is not considered significant.

4.1.3.2 Hydrology and Water Quality

The proposed realignment is not expected to impact the water resources surrounding Fort Monmouth.

No water resources on-post, including Oceanport Creek, Parker's Creek, and groundwater resources are expected to be impacted by the realignment.

4.1.3.3 Geology

No impact to the geology of the area is anticipated as a result of implementation of the proposed action.

4.2 BIOLOGICAL ENVIRONMENT

4.2.1 Fort Huachuca

4.2.1.1 Vegetation

Implementation of the proposed base realignment will result in construction of several buildings within the Cantonment area. To determine the impact of construction on the Cantonment area, a vegetation survey of the proposed construction sites was performed. The following narrative describes survey results.

Within the Cantonment Area mowed lawns and other landscaped, non-native, or disturbed vegetation has replaced much of the native vegetation in the open spaces between structures. Two exceptions are the proposed sites of the TTA/TTD facilities near the parade ground and enlisted barracks near the academic complex. Semi-desert grassland covers approximately 80 percent of the proposed TTA/TTD facilities and associated road sites, with the remaining 20 percent consisting of mowed lawn on the existing parade ground. The semi-desert grassland portion of the site includes typical species such as black grama grass (*Bouteloua eriopoda*), three-awn grass (*Aristida* sp.), lovegrass (*Eragrostis* sp.), Arizona cottontop grass (*Trichachne californica*), sacaton (*Sporobolus wrightii*), wheat grass (*Agropyron* sp.), narrowleaf globemallow (*Sphaeralcea angustifolia*), thread-leaf groundsel (*Senecio longilobus*), wait-a-while (*Mimosa biuncifera*), and honey mesquite (*Prosopis glandulosa*). A few individuals of soaptree yucca (*Yucca elata*) and agave (*Agave* sp.) also occur on the site. This area appears to have burned within the last few years, providing open space for shrub seedlings and herbs that would otherwise appear infrequently in an undisturbed semi-desert grassland community, including silverleaf nightshade (*Solanum elaeagnifolium*), fairy duster (*Calliandra eriophylla*), melonloco (*Apodanthera undulata*), and Parry's sage (*Salvia parryi*). Weedy non-native species such as russian thistle (*Salsola iberica*), tomatillo (*Physalis philadelphica*), and Johnson grass (*Sorghum halepense*) occur occasionally on the site.

The semi-desert grassland community that covers the proposed enlisted barracks site near the academic complex is dominated by sacaton (*Sporobolus wrightii*) and contains little open ground. Several individuals of honey mesquite also occur on the site.

Most losses of vegetation resulting from construction are to landscaped or disturbed areas. Their loss is not significant. The loss of semi-desert grassland at the TTA/TTD facilities and enlisted barracks will cause an adverse, but not significant, impact, owing to the relative abundance of this habitat at Fort Huachuca and previous disturbance at these construction sites.

Implementation of the proposed action or its alternatives will result in some increased intensity of use of the ranges at Fort Huachuca. Additional future field training would be similar to current Intelligence School activities at Fort Huachuca and will take place within areas now used by the Intelligence School at Fort Huachuca. These activities include small arms weapons firing, navigation and field training, and command post exercises for classes ranging from 8 to 36 students. Approximately 10 times per year weekend training exercises will be conducted for groups of 90 to 100 students. Some training exercises involve the use of tracked and wheeled vehicles carrying intelligence equipment. This equipment is restricted to existing roads and no cross country maneuvering is allowed. Training activities tend to be passive with classes primarily remaining in one location while conducting operations.

For the most part, activities will remain on paved roads or in previously disturbed areas, avoiding impact to previously undisturbed vegetation, including sensitive habitat such as freshwater marshes or riparian woodlands. To ensure avoidance of all vegetation resources not previously impacted or disturbed by Intelligence School activity, the installation will periodically monitor training areas as increased training associated with the realignment is implemented. Full use of previously disturbed areas will be made before new areas of use are proposed. Any proposed use of new areas would require additional environmental studies prior to implementation. Evidence of impact to previously undisturbed areas may require mitigation, such as establishment of on-post set-asides or enhancement of disturbed or impacted areas.

Implementation of all other alternatives will have the potential impact since an identical program of increased use of existing ranges is associated with all of them.

4.2.1.2 Wildlife

Construction activities within the Cantonment area will create an adverse but not significant impact to wildlife resources. The areas proposed for construction while still providing wildlife habitat have been previously disturbed by other activities at the post. Subdivision of the semi-desert grassland habitat in the Cantonment area due to development has relatively low wildlife value compared to other areas at Fort Huachuca. With the exception of several black-tailed jackrabbits that were observed on the proposed TTA/TTD site, no wildlife was evident on the proposed development sites. Absence of burrows or other signs of small mammal activity within the proposed TTA/TTD and enlisted barracks sites indicate that the heavy clay soil of these sites is generally unsuitable for typical semi-desert grassland species such as Merriam's kangaroo rat (*Dipodomys merriami*) and white-throated woodrat (*Neotoma albigula*). The area provides habitat for side-blotched lizards, rattlesnakes, and common mammalian species in the area. Furthermore, the area would also support bird species common to the desert grassland communities.

Construction alternatives to the proposed action are also expected to have adverse, but not significant impacts since construction noise and other construction-related impacts would be confined to the construction areas.

Implementation of the proposed action or its alternatives will result in increased intensity of uses on the ranges at Fort Huachuca, which although occurring within areas now used by the Intelligence School at Fort Huachuca, could affect sensitive wildlife such as nesting raptors and their habitat.

Potential impacts to wildlife resources will be mitigated to nonsignificant levels through restriction of operations to previously disturbed areas. Areas already in use will be monitored by the installation to assure that no significant impacts to wildlife resources will occur from increased use in existing areas. Additional measures, such as avoidance of particular areas during nesting season or curtailment of specific activities in specific areas, will be implemented if monitoring shows an effect on the behavior of sensitive wildlife. Any proposed use of new habitat areas would require additional environmental studies prior to implementation.

Other implementation alternatives will have the same impacts and same mitigation requirements since increased range use will be associated with all alternatives.

4.2.1.3 Threatened and Endangered Plant and Wildlife Species

Implementation of the proposed action will result in construction within the Cantonment area as well as increased use of the ranges at Fort Huachuca. Construction of the new facilities within the Cantonment area is not expected to impact any listed or candidate threatened or endangered species. No Federal or state listed threatened, endangered, or candidate sensitive plant species were observed within the sites of the proposed action, despite the favorability of the season for detecting such species (i.e., shortly after the summer rains). The semi-desert grassland community on the proposed TTA/TTD and enlisted barracks sites are potential habitat for a Category-2 candidate sensitive species, beardless fetid-marigold (*Pectis imberbis*). A Category-2 candidate species is regarded by U.S. Fish and Wildlife Service as uncommon, but there is insufficient information regarding its distribution and threats to survival to support federal listing as threatened or endangered. There are no known occurrences of this species within Fort Huachuca. Surveys for this species will be conducted prior to construction to assure that no individuals occur on the site. In the event that individuals are found, the U.S. Fish and Wildlife Service will be notified and appropriate mitigation measures will be taken. Since only a few agaves were found on the construction site and the area is not near any roosting areas, no impact to the Sanborn's long-nosed bat is anticipated.

Increased use of the ranges by the Intelligence School could have the potential to significantly impact candidate or listed threatened or endangered species. Prior to initiation of use of any new area, directed biological surveys and habitat evaluations will be conducted for all listed or candidate species. In the event there is a potential impact to any of these species, the U.S. Fish and Wildlife Service will be consulted. Mitigation measures, including avoidance or compensation, will be formulated on a case by case basis. In this manner, it is expected that any potential significant impact will be mitigated to nonsignificant levels.

Of particular concern is the potential impact to Sanborn's long-nosed bat. The bat roosts in caves on Fort Huachuca in canyon areas of the West and South Ranges and feeds on the nectar of agaves. Although a few agaves were observed on the proposed TTA/TTD site and agaves are potential food sources for the endangered Sanborn's long-nosed bat [U.S. Fish and Wildlife Service, 1987; Arizona Game and Fish Department, 1988], the small agave population in the Cantonment area is not regarded as essential to recovery or survival of the bat species [ACOE, 1989]. Of more concern is the potential effect on the species from on-going or future activities at Fort Huachuca. Potential sources of impact to the bat include:

- o direct disturbance to roosting habitat;
- o impact to areas containing heavy agave concentrations including loss from grading or wildfires;
- o potential disturbance to the species due to activities within the areas containing agaves;
- o potential impact to echolocation mechanisms of the bat from the use of electronic equipment.

It should be noted that all potential construction or phasing alternatives would have impacts to Sanborn's long-nosed bat similar to those of the proposed action since range use would be associated with all alternatives.

As described under the vegetation impact section, existing and future training activities by the Intelligence School are generally restricted to specific areas and does not include cross country maneuvering of tracked or wheeled vehicles. Operations will not be conducted in and around roosting areas. Additionally, most operations are oriented away from areas containing dense concentrations of agaves. Few night training activities are conducted in this area. Electronic jamming activities are conducted using simulated but not actual transmissions. Frequencies used are probably well away from those used by the bats and are not expected to impact individuals. In informal consultation with the U.S. Fish and Wildlife Service, it has been determined that construction and increased training associated with the realignment will avoid potential impacts listed above. The U.S. Fish and Wildlife Service concurs that the realignment action will have no effect to the continued existence of Sanborn's long-nosed bat, and that formal consultation, under Section 7 of the Endangered Species Act of 1973, as amended, pursuant to this action, is therefore not required.

After informal consultation with the U.S. Fish and Wildlife Service, the Army has determined that the realignment action will have no effect on the Sanborn's long-nosed bat. However, as a part of the Army's existing operations and ongoing commitment to the management of natural resources on installation lands under Army Regulations (AR) 200-2 and AR 420-74 for the implementation of NEPA, and the management of natural resources at Army installations, respectively, Fort Huachuca will perform base-wide surveys of Sanborn's long-nosed bat roosting habitat and agave concentrations that provide feeding habitat for the species. Additionally, surveys may attempt to identify potential impact of electronic equipment from all operations at Fort Huachuca on the bat's echolocation mechanisms. Independent of the realignment, the installation will prepare a biological

assessment of existing activities and depending on the results of that assessment, may enter into formal consultation with the U.S. Fish and Wildlife Service pursuant to Section 7 of the Endangered Species Act. Fort Huachuca will implement avoidance or mitigation measures, as required, appropriate with the conclusions of the consultation. Such measures may include, but will not necessarily be limited to, fencing of roosting habitat to avoid direct disturbance by individuals; seasonal avoidance of large stands of agave when the species is present; conservation of large areas containing agave; and avoidance of large stands by permanent relocation, or other modification, of range operations at the installation.

Fort Huachuca will implement, pursuant to AR 420-74, a long-range installation-wide management plan for the Sanborn's long-nosed bat to ensure ongoing compliance with the Endangered Species Act. Specific mitigations resulting from the consultation process will be applied under the management plan. Since implementation of increased training associated with the proposed realignment will not occur for more than two years, it is anticipated that the management plan, or at least an interim plan, will be in effect. Biological surveys and mitigation measures will be ongoing, in conformance with the management plan.

Fort Huachuca's incoming Training and Doctrine Command (TRADOC) which will assume control of the installation during 1991-1992, will implement the Army's Integrated Training Area Management (ITAM) program as a first step in the management plan, which begins with an intense inventory of natural resources to evaluate their ability to withstand training activities presently performed or proposed, and follows with scheduling of activities according to the capability of resources.

4.2.2 Fort Devens

4.2.2.1 Vegetation

The proposed realignment will not impact vegetation, as the realignment consists mostly of personnel and mission changes.

Minor indirect impacts to the vegetation could occur due to new construction to meet the increased housing demand caused by the realignment. The Housing Market Analysis indicates that the increased housing demand could be met by existing housing stock. Therefore, the impacts to the vegetation would be expected to be not significant since no new construction is anticipated. Should new construction occur, it is not expected to cause significant impacts because of the small area which would be affected.

The wildlife species in the regional area, including mammals, birds, reptiles, and amphibians, are not expected to be impacted by the realignment because of the limited impacts to their environment.

In addition, the realignment is not expected to impact the aquatic ecosystems surrounding Fort Devens, which include the Nashua River and its tributaries, wetlands, streams, ponds, and brooks. Minimal new construction in the region is expected to result from the realignment. Also, aquatic ecosystems are protected under federal and state regulatory statutes and programs, such as the Clean Water Act and the Massachusetts Wetlands Protection Act.

None of the new construction will significantly impact vegetation on Fort Devens. The new Information Systems Facility and the addition to Building P-2602 will be constructed within the 2600 area of the post. This area presently contains World War II era barracks buildings and a number of small asphalt roads. The remaining area supports lawn and ornamental tree plantings including white pine, northern white cedar, red pine, and red maple. All of the roadways, barracks buildings, and associated structures will be removed to create an open quadrangle relationship between the new buildings in this area. The construction of the 54,000-square-foot parking area will not impact the terrestrial ecosystem as the proposed locations are disturbed lawn areas.

The new Information Systems Facility will be constructed approximately 95 feet to the north of and parallel to Building P-2602. The removal of existing structures in this area and construction of the Information Systems Facility would have only very minimal impacts because of the existing disturbed condition of the area and its relatively low quality as terrestrial habitat. The 95,000-square-foot addition to Building P-2602 would affect only previously disturbed ornamental landscape.

Operationally, USAISC is essentially restricted to office activities, whereas the USAISD made some use of training areas on the South post. The decreased use will have a positive effect on the terrestrial ecosystems of the South Post.

4.2.2.2 Wildlife

Construction of the proposed facilities is not expected to result in impacts to wildlife resources. Facilities will be constructed in previous use areas and no increase in range use is anticipated. The wildlife species inhabiting the area, which probably includes song birds and small mammals, will be displaced during construction activities. When the disturbed areas are revegetated, they should support some common species of wildlife. The areas adjacent to the construction sites are suitable for supporting the displaced species of wildlife so that no significant impacts are anticipated. Furthermore, other implementation or construction alternatives are not anticipated to create wildlife impacts.

Additionally, new construction or renovations of existing buildings or roadways would not impact the aquatic ecosystems present on-post. No new construction would occur in aquatic habitats or wetlands. Also, the increase in runoff from the impermeable surface areas created through new construction would be minimal.

4.2.2.3 Threatened and Endangered Plant and Wildlife Species

No Federal or state listed threatened or endangered terrestrial species are expected to be impacted by the realignment. Additionally, the realignment activities are not expected to have any impacts on threatened or endangered aquatic species known to occur on-post, as most of the threatened, endangered, or state species of special concern are known to inhabit areas along the Nashua River or the Turner parachute drop zone.

4.2.3 Fort Monmouth

The transfer of USAISC positions from Fort Monmouth to Fort Devens will have no affect on the regional terrestrial ecosystem, as no new construction in the region is expected from the realignment.

The transfer of personnel from the World War II temporary structures to Squier Hall for the USAISC relocation will have only minor impacts to the terrestrial environment if a new parking area is constructed adjacent to the building on existing habitat.

As no new construction is required, the realignment is not expected to impact the aquatic ecosystems either on or surrounding Fort Monmouth, which includes Parker's Creek, Oceanport Creek, Shrewsbury River, Mill Brook, and Lafetra Brook.

The realignment activities are not expected to have any impacts on threatened or endangered species, as none are known to occur on-post.

4.3 SOCIOECONOMIC ENVIRONMENT

This section provides an analysis of the potential land use and socioeconomic impacts of the proposed action. Since the various implementation and construction alternatives would result in the same transfer of authorizations or positions, economic impacts would be similar for all alternatives; however, construction costs and the year of implementation could vary slightly.

The primary source for the quantitative information contained in this section is from Socioeconomic Effects Analysis (SEA) prepared for the proposed realignment activities at Fort Huachuca, Fort Devens and Fort Monmouth by the Institute for Water Resources (IWR). The SEA for each installation is contained in Appendix C of this EIS. The results of this analysis are summarized in the following subsections. Data concerning transfers of authorizations or construction costs were current as of January 9, 1990. Due to the numerous comments on the SEA in the Draft EIS as well as the availability of better construction and payroll information, the SEA was reanalyzed for the Final EIS.

The numbers provided within the analysis should be considered approximate and not absolute since the goal of the modeling effort was to determine the potential magnitude

of economic change and determine its potential significance. Impacts were considered significant if they exceeded the parameters that would be associated with normal economic cycles.

Further, the analysis should be considered a reasonable worst case analysis since the long-term impacts were emphasized and short-term construction related economic benefits were not factored into the modelling. Additionally, the modelling effort makes no assumptions as to other positive or negative economic impacts that may be associated with other activities at the three facilities or surrounding communities. It should be noted also that many economic factors may lessen the impact associated with this realignment. These factors could include an increase in the general economic activities in southern Arizona, additional diversification of the business base within Cochise County and the increase in activity of other functions at Fort Huachuca.

Tables 4.3-1, 4.3-2, and 4.3-3 summarize the socioeconomic effects at Fort Huachuca, Fort Devens, and Fort Monmouth, respectively. Tables 4.3-4 and 4.3-5 summarize the economic impacts associated with construction and one time expenditures at Fort Huachuca and Fort Devens during FYs 1991-1995. A substantial increase (0.5 to 1 percent) is expected to occur in the regional economy of the Fort Huachuca area during the four-year realignment period (1991-1995). An increase in the regional economy in the Fort Devens area is also expected to occur during this period. The economic benefits associated with construction and one-time expenditures will cease once realignment is complete. Potentially significant impacts are expected to occur in the regional economy of the Fort Huachuca area after realignment is complete. An adverse, but not significant impact will occur in the Fort Monmouth area. A long-term beneficial economic impact is anticipated in the Fort Devens area due to realignment.

4.3.1 Fort Huachuca

4.3.1.1 Land Use

Implementation of the proposed realignment activities at Fort Huachuca will result in substantial new construction within the Cantonment area. Even though this construction will result in the intensification of land use in the Cantonment area, this land use is in conformance with the intended use of the area; therefore, no significant impact is anticipated. The proposed realignment will also result in substantial intensification of the ranges for training purposes. Since this increased use is consistent with ongoing activities on the ranges and related environmental protection practices, effects will be minimal and no significant impact is anticipated.

Implementation of alternatives to the proposed action is not anticipated to have any significant land use impacts since the construction would also take place in the Cantonment area and the ranges would still be in use.

Table 4.3-1

**SOCIOECONOMIC EFFECTS AT FORT HUACHUCA AND SURROUNDING AREA
FROM REALIGNMENT OF THE INFORMATION SYSTEMS COMMAND
AND INTELLIGENCE SCHOOL
(numbers approximate)**

Component of Change	Information Systems Command	Intelligence School	Net Change	Percent Regional Change
FORT HUACHUCA CHANGES				
Authorizations				
Military (transfer)	-780	+1,098	+318	
Military (eliminated)	-8	NA	-8	
Civilian	-1,475	+265	-1,210	
Students	0	+1,674	+1,674	
			+774	NA
Salary and Wages (millions)				
Military	-\$20.7	+\$24.3	+\$3.6	
Civilian	-\$61.4	+\$8.4	-\$53.0	
Students	\$0	+\$18.0	+\$18.0	
			-\$31.4	NA
Post Expenditures (millions)	-\$40.5	+\$16.3	-\$24.2	NA
Construction (millions)	\$0	+\$129.0	+\$129.0	NA
One-Time Expenditures (millions)	\$0	+\$40.0	+\$40.0	NA
REGIONAL CHANGES *(excludes one-time construction effects)				
Regional Populations	-6,341	+5,462	-879	-0.85%
Persons Living Off-Post	-5,791	+3,241	-2,550	-2.4%
Children in Public Schools	-1,335	+768	-567	-5.5%
Regional Housing Units				
Rental	-888	+824	-64	
Owner-Occupied	-1,154	+487	-667	
	-2,042	+1,311	-731	-2.1%
Regional Sales Volume (millions)	-\$151.4	+\$60.8	-\$90.6	-6.3%
Regional Employment	-4,318	+3,863	-455	-1.0%
Regional Income (millions)	-\$102.7	+\$60.8	-41.9	-4.8%
Source: Phase II Revised SEA Report, Socioeconomic Effects Analysis, Huachuca/Devens Related BRACO Actions, Socioeconomic Impacts at Fort Huachuca, 1990				

Table 4.3-2

**SOCIOECONOMIC EFFECTS AT FORT DEVENS AND SURROUNDING AREA
FROM REALIGNMENT OF THE INFORMATION SYSTEMS COMMAND
AND INTELLIGENCE SCHOOL
(numbers approximate)**

Component of Change	Intelligence School	Information Systems Command	Net Change	Percent Regional Change
FORT DEVENS CHANGES				
Authorizations				
Military (transfer)	-1,095	+930	-165	
Military (eliminated)	-189	0	-189	
Civilian (transfer)	-261	+2,131	+1,870	
Civilian (eliminated)	-57	0	-57	
Students (transfer)	-1,674	0	-1,674	
Net Change			-215	NA
Salary and Wages (millions)				
Military	-\$28.4	+\$26.9	-\$1.5	
Civilian	-\$10.1	+\$91.1	+\$81.0	
Students	-\$18.0	0	-\$18.0	
Net Change			+\$61.5	NA
Post Expenditures (millions)	-\$3.4	+\$82.5	+\$79.1	NA
Construction (millions)	\$0	+\$71.4	+\$71.4	NA
One-Time Expenditures (millions)	\$0	+\$202.0	+\$202.0	NA
REGIONAL CHANGES *(excludes one-time construction effects)				
Regional Population	-6,029	+8,289	+2,265	+0.10%
Persons Living Off-Post	-2,213	+6,089	+3,876	+0.005%
Children in Public Schools	-853	+1,713	+860	+0.18%
Regional Housing Units				
Rental	-594	+1,075	+481	
Owner-Occupied	-315	+1,102	+787	
	-909	+2,177	+1,268	+0.11%
Regional Sales Volume (millions)	-\$84.6	+\$527.0	+\$442.4	+0.8%
Regional Employment	-4,014	+7,662	+3,648	+0.17%
Regional Income (millions)	-\$67.2	+\$177.4	+110.2	+0.15%
Source: Phase II Revised SEA Report, Socioeconomic Effects Analysis, Huachuca/Devens Related BRACO Actions, Socioeconomic Impacts at Fort Huachuca, 1990. Fort Belvoir impacts covered in a separate EIS: data included in analysis to show full impact at Fort Devens.				

Table 4.3-3

**SOCIOECONOMIC EFFECTS AT FORT MONMOUTH AND SURROUNDING AREA
FROM REALIGNMENT OF THE INFORMATION SYSTEMS COMMAND
AND INTELLIGENCE SCHOOL
(numbers approximate)**

Component of Change	Information Systems Command
FORT MONMOUTH CHANGES	
Positions	
Military (transfer)	-71
Military (eliminated)	-3
Civilian (transfer)	-309
Civilian (eliminated)	-22
Students (transfer)	0
Salary and Wages (millions)	
Military	-\$2.3
Civilian	-\$14.2
Post Expenditures (millions)	-\$37.6
Construction (millions)	NA
One-Time Expenditures (millions)	-\$3.4
REGIONAL CHANGES	
Regional Population	-1,141
Persons Living Off-Post	-983
Children in Public Schools	-227
Regional Housing Units	
Rental	-110
Owner-Occupied	-231
	-341
Regional Sales Volume (millions)	-\$210.6
Regional Employment (person-years)	-2,024
Regional Income (millions)	-\$38.2
Source: Phase II Revised SEA Report, Socioeconomic Effects Analysis, Huachuca/Devens Related BRACO Actions, Socioeconomic Impacts at Fort Huachuca, 1990	

Table 4.3-4

**ANNUALIZED ECONOMIC BENEFITS
FROM CONSTRUCTION/ONE-TIME EXPENDITURES
DURING REALIGNMENT AT FORT HUACHUCA**

	One-Time Expenditures	Construction	Total
Total (millions)	\$40.0	\$129.0	\$169.0
Annual (millions)	\$10.0	\$31.75	\$41.75
Local Expenditure (millions)	\$6.4	\$13.2	\$19.6
Total Regional Sales Volume (millions)	\$10.3	\$4.8	\$15.1
Total Regional Employment (man-years)	140	37	177
Regional Income (millions)	\$1.4	\$2.4	\$3.8

Table 4.3-5

**ANNUALIZED ECONOMIC BENEFITS
FROM CONSTRUCTION/ONE-TIME EXPENDITURES
DURING REALIGNMENT AT FORT DEVENS**

	One-Time Expenditures	Construction	Total
Total (millions)	\$202.0	\$71.4	\$273.4
Annual (millions)	\$50.1	\$17.75	\$67.85
Local Expenditure (millions)	\$25.3	\$14.0	\$39.3
Total Regional Sales Volume (millions)	\$85.0	\$40.3	\$125.3
Total Regional Employment (man-years)	742	505	1,247
Regional Income (millions)	\$11.2	\$9.8	\$21.0

4.3.1.2 Population and Employment

Implementation of the proposed realignment at Fort Huachuca will result in the loss of 788 military (780 transferred and 8 eliminated) and 1,475 civilian positions and the gain of 1,098 military positions (including three military positions from another realignment action), 265 civilian positions (including four civilian positions from another realignment action), and 1,674 students. This will result in a net gain of 774 positions including a gain of 310 military positions and 1,674 students and a loss of 1,210 civilian positions. This change in personnel will result in an overall regional population loss of 879. This will include a reduction of 2,550 people living off-post and an increase of 1,671 persons living on-post. There will be a substantial shift in the overall makeup of the population resulting in a reduction of civilians and an increase in military personnel.

Implementation of the proposed realignment will result in an increased base employment of 774 and a regional employment loss of 455 person-years. There will be a decline in government salary and wages by \$31.4 million due to the replacement of highly paid civilian and military personnel with lower paid personnel. The overall loss of employment is considered significant on a long-term basis.

Prior to September 1995, considerable construction will be occurring at Fort Huachuca associated with the proposed realignment. Table 4.3-4 summarizes this short-term beneficial impact. Even though concern has been expressed by the residents of Cochise County that most construction contracts and supply contracts would be awarded to businesses outside of the county, it is estimated that 177 person years of employment would be generated within the County during the four years of construction activity even assuming that only a small fraction of contracts (10 to 15 percent) would be awarded to Cochise County firms.

Other implementation alternatives would have the same general impact on population and employment. Those alternatives involving less construction would decrease the economic benefits from construction prior to full implementation of alignment.

4.3.1.3 Changes in Economic Trends

Implementation of the proposed realignment will result in the direct loss of \$31.4 million in wages and \$24.2 million in direct expenditures from USAISC. On a regional basis, there will be a loss of \$90.6 million in regional sales volume and \$41.9 million loss in regional income. This impact is considered significant. Construction activities between FY 1991 and 1995 will amount to \$129.0 million and one time expenditures will amount to \$40 million. It should be noted that many of these expenditures are one time only and will occur before USAISC transfers most of its activities to Fort Devens. Assuming that a substantial amount of the construction contracts will go to out of county firms, it is still projected that the regional sales volume will increase by \$15.1 million annually and the Regional Income by \$3.8 million annually during the four years of construction.

There will be an adverse impact to county and local governments due to the decline in sales and regional sales. This impact is considered potentially significant since there will be a population decrease resulting in an decreased share of state revenue.

Some mitigation of this significant economic impact to nonsignificant levels may be possible depending on the ambitions and actions of local/regional communities. One possibility involves the availability of the 200-acre parcel of land adjacent to the Joint Libby Army Airfield/Sierra Vista Airport which is being offered by the Army for sale as an air industrial park. This land is ready to be placed on the market as a result of Public Law 99-661, Sec. 2187. The intent of the public law is to provide an additional economic base for Sierra Vista to mitigate dependence of the local economy on Fort Huachuca. It is feasible that local initiatives could result in legislation to provide additional incentives for private investment. Such an incentive could be the introduction of a Maquiladora plan for international cooperation such as light industrial/high technology joint manufacturing across the border with Sonora, Mexico. The Department of Defense, Office of Economic adjustment has been working with the City of Sierra Vista and the County of Cochise since 1987 to develop strategies to reduce the economic dependency of the region on Fort Huachuca and to diversify the economy. A study completed by the University of Arizona has defined some of these strategies. Implementation of the strategies by local interests would assist in mitigating the expected adverse impacts. Continued monitoring of regional economic conditions, coupled with continued emphasis on developing non-military related economic growth, may temper this impact somewhat.

Mitigations consisting of providing additional construction contracts to local firms will center around the notification of firms of potential contracts being awarded. A contractors awareness program will be established to brief contractors on upcoming projects and describing both prime and subcontracting opportunities. Additionally, lists will be available locally so that prospective subcontractors will have information on potential prime contractors that they can contact.

It should be noted that significant impact to the regional economy will occur for all alternatives to the proposed action.

4.3.1.4 Real Estate and Property Values

Of primary concern in the Sierra Vista area, as well as all of Arizona, are declining housing markets. The area had experienced a building boom which has slowed dramatically in the last two years. Housing valuations have been stagnant during this time with overall prices rising less than 2 percent. The housing in the \$100,000 plus bracket in the Sierra Vista area appears to have been affected more significantly by the slowdown than other segments of the market.

A significant downturn in the housing market is anticipated once actual movement of personnel from Fort Huachuca commences. This may significantly impact the valuation of single-family residences. Notwithstanding activation of the Homeowners Assistance Program if warranted, there will likely be a significant decrease in real estate values of these homes in Sierra Vista and surrounding areas.

Based on the revised IWR modeling, there will be a 731-unit decrease in the total number of occupied housing units within the region. This translates to a decrease of 667 units owner-occupied dwellings and a 64-unit decrease in renter-occupied dwellings.

The effect that the announcement of the proposed realignment at Fort Huachuca had on housing values is speculative at this time. Several comments made during EIS scoping indicated that there had been a dramatic drop in housing prices immediately following the announcement. Conversations with various realtors and other knowledgeable persons in the area have indicated a wide range of opinions from no impact on property values to a significant drop in property values. Some have indicated that new construction and remodeling have dropped significantly since the announcement. A review of sales statistics [Army Corps of Engineers, 1990] indicates that there has been no decline in the average (mean) price or median price of single family housing sold in the area since the announcement. Market conditions could, however, change as substantial numbers of USAISC positions begin the transition to Fort Devens.

The overall net effect of the realignment action will be a small reduction in the demand for rental housing and a substantial decrease in demand for owner-occupied housing. There is concern that some Fort Huachuca personnel transferred to Fort Devens will not be able to afford comparable housing at the new location due to the higher property values at Fort Devens.

The major mitigation associated with this housing impact is a detailed monitoring on sales and property values during the next four years of implementation of the realignment activity. If a substantial decline is noted, there will be the initiation of a Homeowners Assistance Program (HAP) for military and civilian employees. Civilian employees affected by the relocation are eligible for Department of Army Relocation Services for Employees (DARSE), which guarantees home sales.

4.3.1.5 Schools

There will be a net loss of an estimated 567 students to the regional public school enrollment. This is a potentially significant impact to the regional schools. Since available housing units on-post will be infilled by Intelligence School Personnel, on-post schools are expected to retain approximate current enrollment levels. The greatest impact will be to off-post schools serving primarily Sierra Vista.

This impact is considered significant. The loss of off-post residents within the district could effect the district's ability to meet bonding obligations. There will also be a

significant loss of revenue to the district as a result of fewer students. Each elementary student generates approximately \$3,360 and each high school student \$3,820 in revenue capacity for the district. A loss of 567 students creates a loss of revenue in excess of \$2 million for the Sierra Vista Public Schools. Mitigation is limited; however, this impact can be partially reduced through maintaining dialogue with the school district's officials to reduce the overall effect of this enrollment decline by careful planning.

4.3.2 Fort Devens

4.3.2.1 Land Use

The proposed realignment of Fort Devens will not change land use and is not expected to result in significant land use impacts. On-post construction is limited to areas which are already developed. Floor space being vacated by USAISD would be renovated for office space of USAISC. The Information Systems Facility (ISF) will require 60,000 square feet of office space and the headquarters function will require a 95,000-square foot addition to existing facilities. The new building will be situated on land adjacent to building PN-2602 that is currently occupied by temporary wooden buildings that are scheduled for demolition. Therefore, all new construction will occur in existing developed areas. No significant land use impacts are anticipated with the implementation of alternatives to the proposed action.

4.3.2.2 Population and Employment

Based on information provided by USAISC, there will be a net migration of 1,813 civilian jobs to the Fort Devens area. The Fort Huachuca area will receive 261 civilian positions with USAISD (and 57 civilian positions will be eliminated), while the Fort Devens area would gain 1,475 civilian positions from Fort Huachuca, 347 from Fort Belvoir, and 309 from Fort Monmouth for a total inflow of 2,131 civilian positions from USAISC.

The average grade level of USAISC civilian personnel at Fort Huachuca is 10.3. The average age of this work force is 48.2. Preliminary estimates by USAISC are that as few as 20 percent of the civilian work force will actually relocate to the Fort Devens area. Positions that remain unfilled after the move will be recruited from the local area. To the extent that these positions cannot be filled locally they will have to be filled by those outside the local labor market. Thus, the population of the area is expected to increase with individuals following their jobs or attracted to the area because of the employment opportunities created by the proposed realignment. The net gain in population is projected to be 2,265. This represents less than 0.10 percent of the 1987 population for the four counties that comprise the Fort Devens area and is considered not to be significant.

The number of military personnel (excluding students) stationed at Fort Devens will decrease by 354. It is estimated that 1,095 will transfer out and 930 will transfer in, while 189 military positions will be eliminated. All 1,674 military students currently at the

Intelligence School will leave. Thus, total military strength including students will be reduced by 2,028.

Currently at Fort Devens there are 6,000 military positions; after the proposed realignment there will be 3,972. The composition of the military will be changed after the realignment as a greater percentage of the personnel stationed at Fort Devens will be officers. As the decline in military strength will be more than offset by an increase in the civilian population, the decline is not considered to be significant.

As a result of the proposed realignment, employment in the four county area is expected to increase by 3,648. This increase is not considered to be significant since it represents approximately 0.17 percent of the regional employment base.

4.3.2.3 Changes in Economic Trends

The initial increase in wages and salaries to both military and civilian employees is estimated to be \$61.5 million. Post purchases are anticipated to increase by \$79.1 million. The total impact of these changes is determined through the multiplier process.

The proposed realignment is estimated to increase regional sales volume in the four-county area by \$442.4 million or approximately 0.8 percent. This increase is considered to be insignificant as it is small when compared to the overall level of income.

Regional income in the four-county area is anticipated to increase by \$110.2 million. This represents an increase of less than 0.2 percent and is considered to be not significant.

Regional employment associated with the proposed realignment would increase by 3,648 person years. This increase in economic activity will increase the revenue basis for the four-county area surrounding Fort Devens resulting in beneficial impacts to these communities.

4.3.2.4 Real Estate and Property Values

It is estimated that the proposed realignment will result in the increased demand for 787 owner occupied units and 481 rental units within the four-county area. The rental unit demand represents 0.01 percent of vacant housing in 1980 (10 year census interval) and .08 percent of total owner occupied housing. The small increase in demand for housing is considered to be insignificant.

Based on information provided by the Greater Boston Board of Realtors, the median price of a house in the Fort Devens area was \$129,000 in the first quarter of 1989. According to the Cochise County Board of Realty, the median price for residential home sales in the Fort Huachuca area was \$71,000 for the same period.

Based on results of the 1989 Segmental Housing Market Analysis performed for Fort Devens Directorate of Engineering and Housing (DEH) by the New England Division (NED), the proposed realignment could increase the number of surplus housing units from 8 to 42 in FY 94. Some of these units are planned for conversion to four bedrooms. The remaining surplus may be allocated to military personnel who are currently living off-post but desire to live on-post. Therefore, these impacts are not considered to be significant.

4.3.2.5 Schools

School enrollment is expected to increase by 860 pupils in the four-county area. On a regional basis, this impact is not considered to be significant due to the large area and number of school districts involved. Due to the loss of military personnel living on base, there may be a decrease in the number of students attending Ayer Public Schools. Approximately 70 percent of the Ayer School System enrollment is accounted for by dependents of Fort Devens military and civilian personnel. It is estimated that enrollment of these dependents will decline from 1,823 currently to 1,647, a drop of 176 or approximately 10 percent. Public Law 81-874 entitlements are anticipated to decline by \$0.6 million, from \$4.2 million to \$3.6 million.

The enrollment in the Ayer School System of pupils residing at Fort Devens is anticipated to decline by 260. This decline is offset to some extent by an increase in pupils with federally employed civilian parents (72) and pupils with a parent in military services (11). Currently, entitlements to the Ayer School System for pupils residing at Fort Devens are \$2,608 per student. Aid for the other student categories is about \$163 per student. A reduction in enrollment of this magnitude could conceivably result in staff reductions, program curtailments and change in building utilization. Discussions with school officials indicate that staff reductions may be necessary. These impacts are judged by school officials not to be significant.

Enrollment predictions assume that there are more vacant on-post housing units after the realignment. If these units are backfilled by personnel currently living off-base, then school enrollment should not decline. Currently there is a waiting list of over 200 families desiring to live on-post. Thus on-post housing units vacated after the realignment are anticipated to be filled by families currently living off-post who desire to live on-post. There may be some short-term overcrowding as USAISC's move to Fort Devens is scheduled ahead of USAISD's move to Fort Huachuca. This overcrowding is not considered serious by the Ayer Superintendent of Schools. It should last between one and two years.

The elementary school on-post is part of the Ayer School System. The potential impacts on the Ayer School System are discussed above. No significant impacts are anticipated on the child care facility. Any drop in military demand is likely to be offset by an increase in civilian demand for their services assuming civilians are authorized to use the facility.

4.3.3 Fort Monmouth

4.3.3.1 Land Use

Regional land use will not be affected by this realignment since only a small number of people will be relocated.

Information Systems Management Activity (ISMA) currently occupies Squier Hall. Upon their departure, the vacant space could be utilized by AMC. This will have no significant effect on installation land use.

4.3.3.2 Population and Employment

The overall decrease in population from the realignment is 1,141 people or 0.05 percent of the population. This change is not considered to be significant.

The population residing on the base is expected to decrease by 74 military personnel. This represents approximately 2.7 percent of the base military population and does not constitute a significant impact.

A total reduction in employment of 2,024 person-years is expected as a result of the realignment. The reduction in employment is not considered to be a significant impact as it represents only 0.2 percent of 1987 employment levels for the area.

4.3.3.3 Changes in Economic Trends

The proposed realignment is estimated to decrease regional income directly by \$38.2 million. This impact is not considered to be significant as it only represents 0.1 percent of 1987 income levels.

The proposed realignment is estimated to decrease regional sales volume by \$210.6 million. This reduction is too small to be considered a significant impact as it represents only 0.5 percent of total sales in 1987.

4.3.3.4 Real Estate and Property Values

The demand for housing would decline by 110 rental units and 231 owner-occupied units for a total of 341 housing units. This impact is not significant because of the size of the housing stock. It represents only 0.05 percent of the housing stock.

Housing costs are anticipated to be lower for those individuals transferring to the Fort Devens area. The 1989 first quarter median house price was \$178,000 in the Fort Monmouth area compared to \$129,000 in the Fort Devens area.

With the reduction in post strength necessitated by the consolidation of USAISC, it is anticipated that the occupancy rate for housed officers on-post could fall from 98 percent to 90 percent. Enlisted occupancy rate would decline from 91 percent to 81 percent. This is the worst case scenario that assumes all military personnel are housed on-post. It also assumes that there is no backfilling of on-post housing by personnel currently living off-post. If all vacated on-post housing is filled by personnel living off-post, then there will be no impacts on housing.

4.3.3.5 Schools

The schools in the four-county area surrounding Fort Monmouth will lose an estimated 227 students. This represents a reduction of up to \$512,000 in Public Law 81-874 Aid. This loss in student population is approximately 0.045 percent of the student population in the Fort Monmouth area and is not considered to be significant.

There are no schools on the installation. The child care center is currently fully utilized and the transfer of personnel to Fort Devens will reduce attendees. These impacts should be minor since the child care services are provided based on demand and the fact that these services are constantly fluctuating with the supported population.

4.4 CULTURAL RESOURCES

4.4.1 Fort Huachuca

Construction of the proposed facilities at Fort Huachuca is not expected to create any significant impacts to cultural resources. Marie Cottrell, base archaeologist, has surveyed around most construction areas and concluded that there are no surface manifestations of cultural resources that would be impacted. However, the construction plans include underground additions of various utility lines (gas, electrical, sewage, etc.) that could potentially impact buried sites. In the event that subsurface construction reveals previously undetected cultural resources, all work should cease and a qualified archaeologist should examine newly revealed materials to assess potential significance. Construction will not affect the Historic District on-post. Additional areas not surveyed will be surveyed prior to construction. Resources found will be evaluated as to its eligibility for National Register Status as appropriate. Sites will either be avoided or the required testing and evaluation procedures will be conducted pursuant to Section 106 of the National Historic Preservation Act of 1966 (NHPA) as amended.

The proposed realignment will result in increased activities on the ranges at Fort Huachuca. There is a potential that known or previously unknown prehistoric or historic sites could be adversely impacted by the increased use of the area. Since the areas of future use cannot be determined at this time, this impact is considered potentially significant.

Increased use of ranges at Fort Huachuca will have the potential to impact known or unknown National Register eligible sites. All new areas proposed for use by the Intelligence School will be surveyed for cultural resources. Any resources found during the surveys will be evaluated as to its eligibility for the National Register. All requirements of the Section 106 process will be complied with, in coordination with the Arizona State Historic Preservation Office (SHPO). In accordance with the Army's Programmatic Agreement for cultural resources (Appendix D), the installation will develop a Memorandum of Agreement with the SHPO for retrieval, treatment, and mitigation for impacts to cultural resources.

It should be noted that the various implementation alternatives will also result in the same level of impacts.

4.4.2 Fort Devens

The realignment of Fort Devens will involve several activities which may cause some alteration of structures and landscapes. A few of these alterations have the potential to affect historic properties (historic or archaeological sites) that may be eligible for inclusion for listing on the National Register of Historic Places.

At this time, only one area has been identified as being potentially eligible for the National Register; that is the 1929-1940 Permanent Cantonment area of Fort Devens (Fort Devens Historic District). Modifications to interiors of structures within the historic district will probably not affect the district's eligibility. Modifications to the exteriors of buildings or to the landscape may affect the setting or character of the district. Modification plans need to be reviewed by and coordinated with the Massachusetts State Historic Preservation Office (MASHPO) in accordance with Section 106 of the National Historic Preservation Act of 1966, (NHPA), as amended. Modifications to buildings in the 600 area and to new buildings will not have an effect to any historic structures.

The area identified for new construction has a low potential for containing either historic or prehistoric archaeological sites. The ground surface in the 2600 area has been heavily disturbed by previous construction and demolition activities. No further investigation is recommended. Approximately half of the buildings originally built in this area have already been demolished. The WWII wooden temporary structures in the 2600 area are typical of those chosen for Historic American Buildings Survey (HABS) Level II documentation as part of the nationwide survey and recording of extant WWII temporary structures in accordance with the Memorandum of Agreement signed by the Department of the Army, the Advisory Council on Historic Preservation and the National Council of State Historic Preservation Officers. No further documentation is recommended. The letter from the Massachusetts State Historic Preservation Office (Appendix B) concurs that no impact will occur.

The majority of the infrastructure improvements and utility upgrades have very little to no potential for affecting historic properties. The majority of the traffic improvements will not involve any earth-moving or other alteration to the setting or landscape. In both

cases, with proper coordination with the MASHPO, adverse effects can be avoided or minimized.

An additional topic, which was identified during the EIS scoping process, involves changes in use of the Training Area (South Post) as a result of the realignment. The Intelligence School used tracked vehicles in the training area. USAISC will only use established ranges for required rifle qualification training, and will not have a continued effect on the South Post landscape. This could be viewed as a potential beneficial effect, as tracked vehicles can disturb the land surface (and potential historic and archaeological sites) and increase erosion. However, the South Post will still be used by U.S. Army Reserve units that require tracked vehicle training areas. Therefore, the overall effect of the realignment is expected to be negligible on the South Post.

4.4.3 Fort Monmouth

Squier Hall, formerly Squier Laboratory, is a contributing structure to the Fort Monmouth Historic District, which was identified in 1983. The Fort Monmouth Historic District is comprised of 115 buildings, most of which were constructed between 1927 and 1937.

The transfer of personnel to Squier Hall will have no effect on the Historic District. Interior modifications to the structure should have no effect on the district's setting or character. Exterior modifications, such as landscaping and increased parking area, could potentially have an effect on the quality of the historic district. Also, an area to the rear of Squier Hall, towards Parker's Creek, is expected to have a high sensitivity for prehistoric sites. Any plan to expand parking facilities could encroach on this area, requiring an archaeological survey. However, no renovations or exterior modifications to Squier Hall are planned as part of this action. Any future plans for external modifications to Squier Hall or the surrounding grounds will be coordinated with the New Jersey State Historic Preservation Officer (NJSHPO).

4.5 NOISE

4.5.1 Fort Huachuca

Realignment activities will create additional noise due to both construction as well as increased on-post military and contractor traffic. This impact is considered adverse, but is not expected to reach levels of significance. The proposed realignment action will cause an increase in the frequency of small arms use from training incidental to the Intelligence School. An adverse but not significant increase in environmental noise from small arms use is expected. Implementation of alternatives to the proposed action will also result in no significant noise impacts. No mitigation is required, however, the Army should continue to have the USAEHA conduct environmental noise assessments and update noise contours as required by Army regulations (AR 200-1).

4.5.2 Fort Devens

The noise levels in the rural towns surrounding Fort Devens are not expected to significantly increase due to the realignment activities. Traffic noise may increase due to the increase of personnel commuting to Fort Devens, but this impact is expected to be minimal.

The on-base noise level during the realignment activities is expected to increase due to the construction and demolition activities occurring. Once the construction activities are completed, there may be a slight increase in traffic noise due to the increase in personnel commuting to Fort Devens, but this impact is expected to be insignificant.

4.5.3 Fort Monmouth

The noise levels in the Fort Monmouth region will not increase due to the realignment activities.

The noise level during the realignment activities is expected to increase temporarily due to the construction and demolition activities. No long-term effect on noise levels is anticipated.

4.6 TRAFFIC

4.6.1 Fort Huachuca

Activities during construction and after realignment is completed will increase traffic on the post while decreasing peak traffic in and out of the installation. Planned modifications to the installation roadways will reduce any potentially significant impact to adverse but not significant levels. Implementation alternatives will also have the same level of impact.

4.6.2 Fort Devens

A larger commuter work force will add approximately 2,000 cars per day to Fort Devens on roads leading to and within Fort Devens. Compared to the volume of the traffic handled by adjacent roads, this increase is approximately 6 percent. The increase might be noticeable at some intersections, but impossible to predict with any accuracy. The installation has requested that the state highway department construct high speed on- and off-ramps on Route 2 at Jackson gate. Public transportation will not be affected by this change; however, a proposed Massachusetts Bay Transit Authority (MBTA) stop at Verbeck Gate will help in reducing vehicular traffic impacts. Because the total traffic volume including the increase is below the capacity of the road, the impact is considered not to be significant.

On-post traffic volume to the various sites where USAISC will be located will not be significantly impacted. Volume increases are expected to be between 11 and 14 percent on-post. The installation's Directorate of Engineering and Housing has undertaken several road improvement projects designed to reduce congestion and improve safety at all major intersections. This will have a positive impact on on-post traffic flow.

4.6.3 Fort Monmouth

The relocation of positions to Fort Devens will result in a minor reduction in traffic on-post. This reduction will probably not be noticeable unless traffic is actually counted.

The on-post shuttle bus will also have a minor decrease in usage.

4.7 AESTHETICS AND RECREATION

4.7.1 Fort Huachuca

The proposed activities associated with realignment of Fort Huachuca will not adversely affect the recreation or aesthetic aspects of Fort Huachuca except for the loss of open space required for new construction. Since the areas identified for new construction are within the Cantonment area and not in aesthetic or recreation-sensitive areas, loss of this open space is not considered a significant impact.

The Fort will make use of landscaping and visual design techniques to enhance the aesthetic quality of the new facilities in the Cantonment area, Outdoor Sports Complex, and Physical Fitness Center/Gymnasium.

The construction of the Outdoor Sports Complex and Physical Fitness Center/Gymnasium will provide a beneficial recreational impact to the Fort.

There is a potential that increased training use of the ranges will adversely affect recreation use such as hunting. This impact is considered adverse, but not significant since the training areas are not expected to be within areas of heavy recreational use and timing of training can minimize any weekend interference with recreation.

All of the proposed construction projects are within the Fort boundaries and no additional restrictions to recreational use of the installation are proposed; therefore, no direct aesthetic or recreational impact to the surrounding communities should be expected.

4.7.2 Fort Devens

Realignment will not adversely affect the aesthetic environment of Fort Devens. Aesthetic value would increase in the 2600 area because of replacement of older barracks buildings, with new buildings and formation of a new quadrangle area.

The small increase in population to the surrounding areas will not overtax existing recreational resources. The decreased military population of Fort Devens will result in reduced participation in some post sponsored tournaments. Usage of facilities should stay the same. This is due to the fact that as civilians are authorized to use these facilities on a space available basis, and with less military personnel assigned more space should be available. Post facilities are currently utilized beyond design capacities implying that a reduced demand will improve availability.

4.7.3 Fort Monmouth

The aesthetic value of the regional area will not be affected by the realignment. Impacts on regional recreation will be minimal. The same types of recreational activities are available in both the Fort Devens and Fort Monmouth area.

4.8 HAZARDOUS OR TOXIC MATERIALS

4.8.1 Fort Huachuca

The USAICS currently generates hazardous materials/wastes in the form of lithium batteries, cleaning solvents (alcohol, rifle cleaner, trichloroethane), antifreeze, paints, and compressed gas cylinders. The relocation of USAISD to Fort Huachuca will add additional cleaning solvents, film developing chemicals, and antifreeze. However, the quantities are small, methods to properly recycle or dispose of these materials are already in place. The proposed action will not drastically increase the amount of hazardous wastes generated, nor will it involve the use of explosives. Capacity at the post is sufficient to handle this additional amount. Provided the procedures identified in the Hazardous Waste Management Survey [USAEHA, 1988] are followed, no significant impacts from hazardous or toxic materials are anticipated.

4.8.2 Fort Devens

Hazardous materials generation would not likely increase and management of these materials would not be adversely affected by realignment. Neither the Intelligence School nor the Information Systems Command generate a significant quantity of hazardous or toxic materials as part of their operations.

Construction related effects of hazardous materials handling are restricted to the location of the new Information Systems Facility and quadrangle in the 2600 area. World War II era buildings existing in the area must be demolished to accomplish these alterations. Prior to the demolition, asbestos would be removed and disposed of in compliance with the Fort Devens Program and EPA regulations under National Emission Standards for Hazardous Air Pollutants: Asbestos Standard (40 CFR Part 61, Subpart M) and applicable state regulations (Department of Environmental Protection: 453 CMR 6.00, 18.00, 19.00; 310 CMR 7.09, 7.15; and Department of Labor and Industry: 543 CMR 6.00, 6.17). Underground storage tanks associated with these buildings must also be removed. During construction of Building P-2602 in the same area it was discovered that 4 out of 10 underground oil storage tanks on the site leaked.

Concentrations of 400-1,000 ppm of No. 2 fuel oil were found in the soil sampled. This is below the threshold to be considered hazardous waste (personal communication, Mr. Pierce, Fort Devens, September 1989). The tanks in the vicinity of the new construction for realignment may have a similar percentage of leaking tanks and similar concentrations of contaminated soil since they were installed during the same time period. Therefore, sampling must be performed to determine concentrations of oil in the new construction sites. If contamination is found, it must be removed during the construction process.

A plan for removal of underground storage tanks in the 2600 area is being developed. In general, the plan consists of the following. Leaking tanks will be identified during excavation. The contents of the tanks will be removed and reused or disposed of in compliance with applicable federal and state regulations. Where leakage is identified, soils will be tested in the laboratory for total petroleum hydrocarbons; only No. 2 fuel oil is stored in the tanks. During the removal process, soils will be tested with a photoionization detector to direct work. If large areas of contamination are found, soil borings will be collected. Concentrations will be removed to 100 parts per million total petroleum hydrocarbons.

Following excavation, standard compacted backfill will be used for capping. Groundwater contamination is not expected, but will be addressed if discovered.

4.8.3 Fort Monmouth

There is no demolition planned at Fort Monmouth as a part of this action.

No long-term effects on hazardous materials management would occur due to the realignment.

4.9 UTILITIES AND PUBLIC SERVICES

4.9.1 Fort Huachuca

4.9.1.1 Water Supply

The existing water demand of about 4.2 mgd will be increased by an additional 237,500 gallons per day by the proposed action. As the available supply from Fort wells is approximately 5.4 mgd, no impacts to the water supply will occur. No impacts are expected to occur to the local area groundwater. Expansion of the distribution system is proposed as part of the utility/roadway upgrade to insure adequate water supply lines for new facilities. As standard conservation measures, water conserving faucets and shower heads should be used for new construction and renovation projects. Mitigation measures identified for water quality should also pertain to water supply.

4.9.1.2 Wastewater Facilities

The proposed project is not expected to require additional facilities as existing facilities are adequate to treat the additional estimated 160,620 gpd generated by the project actions. Due to future anticipated growth, engineering analysis should be conducted to insure that wastewater treatment capacity will be adequate for future demand. Additional sewer lines for new facilities are included as part of the utilities/roadway upgrade. Sewage treatment facilities will continue to be monitored for potentially harmful contamination to soils and groundwater.

4.9.1.3 Natural Gas and Electricity

Southwest Gas Company expects to be able to fully supply the increase of 5,964 MBTU for the base and other demands for surrounding areas without any problems. Tucson Electric Power Company foresees no impacts in their ability to provide the additional 10,137 MWH for the proposed project. Distribution lines to new facilities and additional electrical transmission lines and transformers are included in the utilities/roads upgrade. Energy-efficient heating and cooling systems, proper building insulation, regulation of heater and air conditioning thermostats, turning lights off when not in use, and use of energy efficient lighting should be incorporated as conservation measures. Such measures should be encouraged for use by the surrounding communities as well as the base.

4.9.1.4 Solid Waste Disposal

A temporary increase in solid waste is expected during realignment from the disposal of unwanted goods and packing material during personnel movement, and from construction and renovation activity. No significant impacts are expected from this increase.

After completion of realignment, a slight increase in solid waste should occur due to the increase of personnel. However, this should be partially offset by a decrease in the surrounding area from fewer civilian employees. This is not expected to significantly impact or alter the lifespan of the Huachuca City landfill. A program of trash separation and recycling is being implemented by a private concern at the landfill site which includes a solid waste recycling facility to handle the expected material.

4.9.1.5 Public Services and Safety

Realignment activities and the additional field training activities are not expected to impact public safety on- or off-base or the need for additional police and fire protection on- or off-base. All training activities should include safety instruction and require CPR and first aid training. The joint programs for mutual fire assistance should continue.

Additional use of ranges could increase the potential for wildland fires due to additional personnel in the area. This potential significant impact can be reduced to nonsignificant levels through continued use of fire prevention programs.

The Raymond W. Bliss Army Hospital and the two Fort Huachuca Dental Clinics are currently operating at full design capacity. Transfer of USAISD to Fort Huachuca will increase the active duty support requirements for these activities. Actions unrelated to the realignment are being undertaken to provide additional medical staff to Fort Huachuca. Construction of a new dental clinic is programmed to meet the additional dental requirements.

4.9.2 Fort Devens

4.9.2.1 Water Supply

The alignment activity is not expected to impact the potable water resources. The slight increase in base personnel which would live off-base would be offset by the decrease in personnel on-base and will result in no impacts in the demand for drinking water.

4.9.2.2 Wastewater Facilities

The realignment will have minimal impacts to the wastewater treatment facilities in the surrounding towns as there will probably be minimal new housing construction. The wastewater treatment facilities in the surrounding area are sufficient to process any additional wastewater discharge.

Furthermore, the realignment will decrease the amount of personnel living on-post, thereby decreasing the amount of wastewater to be treated at the Fort Devens Wastewater Treatment facility.

4.9.2.3 Natural Gas and Electricity

Although conversion from barracks buildings to office space may reduce energy use due to reduced occupancy schedules, any savings may be offset by increased electrical use from mission-related equipment associated cooling requirements. Additionally, the proposed construction is replacing less than 100,000 square feet of wooden structures (some of which are seldom used) with almost 400,000 square feet of energy intensive administrative space.

4.9.2.4 Solid Waste Disposal

The increase of personnel living off-post will probably increase the amount of solid waste generated in the towns surrounding Fort Devens. This impact is not expected to be significant as most of the personnel will probably be living in existing housing where the solid waste is currently being collected. The total increase in population is small and would likely be spread among the towns in the region, thereby distributing the generation and disposal of solid waste.

The amount of solid waste generated at Fort Devens during the realignment activities is expected to increase sharply while personnel are moving and disposing of unwanted goods from residential areas, as well as the renovation and demolition of existing buildings. This increase of solid waste is expected to be only temporary and should not significantly impact the solid waste disposal activities on-post.

Following the realignment, the amount of solid waste generated on-post is expected to decrease due to the decrease in personnel living on-post. This decrease in solid waste will not affect the closure of the Fort Devens landfill or the future transfer of the waste to a designated State resource recovery facility.

4.9.2.5 Public Services and Safety

With the majority of the people moving into the area being civilians, they will be dispersed throughout the surrounding communities much like the installation's current civilian population. Consequently, the communities should not require measurable increases in police or firefighters. The numbers of individuals expected to migrate to each community are not large enough to significantly impact public safety departments.

The installation follows a continual real property improvement program and demolishes obsolete temporary structures and upgrades permanent structures to meet current safety requirements. With new construction programmed for the realignment in areas currently

occupied by wooden frame structures, fire support could decrease slightly. The conversion of barracks space to administrative space will also reduce fire support requirements. The reduction in equipment or personnel may be negligible. With a larger daytime population comes a greater volume of commuter traffic. All major roads have been studied and several intersections are to be reconstructed to provide better traffic flow. These changes will reduce the potential for accidents at congested intersections, consequently, reducing emergency traffic control requirements. The realignment will have no significant impact on the criminal investigative capabilities of the post.

4.9.3 Fort Monmouth

4.9.3.1 Water Supply

No impacts are expected to result from realignment actions.

4.9.3.2 Wastewater Facilities

The proposed realignment will have no impacts to the wastewater treatment facilities in the surrounding towns, as no new buildings will be constructed.

The realignment will probably slightly decrease the amount of wastewater generated on-post due to the relocation of USAISC personnel positions to Fort Devens.

4.9.3.3 Natural Gas and Electricity

Reductions in energy consumption as a result of this realignment are dependent on whether or not personnel backfilling Squier Hall are coming out of World War II wooden buildings. This move would allow the installation to mothball or demolish the vacated buildings thus reducing energy usage.

4.9.3.4 Solid Waste Disposal

The amount of solid waste generated during the realignment activities is expected to increase sharply while personnel are moving and disposing of unwanted goods from residential areas, as well as the renovation of Squier Hall and the demolition of the WWII buildings. This increase of solid waste is expected to be only temporary and should not significantly impact the solid waste disposal activities on-post.

Following the realignment, the amount of solid waste generated on-post may decrease slightly due to the reduction in personnel.

4.9.3.5 Public Services and Safety

The movement of civilian and military employees and their dependents from the Fort Monmouth area will have no measurable impact on services provided by hospitals on and around Fort Monmouth.

The work load of civilian and military police and firefighters will not be affected by this small decrease in personnel. Thus, the impact is considered to be not significant.

4.10 THE RELATIONSHIP BETWEEN SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Implementation of the proposed action will result in short-term impacts to the socioeconomic, physical, and biological environment. In the long-term, the realignment of the facilities will add overall greater productivity through the gain of efficiencies. Energy conservation should increase due to the use of the most energy efficient design possible for new construction.

4.11 ANY IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES WHICH WOULD BE INVOLVED IN THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED

Implementation of the proposed realignment of the three installations will result in the commitment of resources including energy and other natural resources associated in the construction of new facilities and/or the renovation of existing facilities.

SECTION 5 - PUBLIC INVOLVEMENT

5.1 EIS SCOPING

At the beginning of the EIS process, the Corps of Engineers conducted public scoping sessions to describe the realignment plans and EIS process and to give interested persons an opportunity to comment on issues and concerns they believed should be addressed in the EIS. Scoping sessions were conducted on June 9, 1989 in Ayer, Massachusetts (Fort Devens) and June 22, 1989 in Sierra Vista, Arizona (Fort Huachuca); those communities that would be most affected by the transfer of missions and personnel positions. Transcripts were prepared and reports summarizing these meetings were distributed to concerned persons and are on file with the Corps. Letters received concerning these meetings and the proposed realignment actions are included in Appendix B. All of the concerns expressed to the Corps during the course of this EIS process have been considered and addressed herein as appropriate. It was determined, in coordination with Fort Monmouth, that associated base realignment actions at Fort Monmouth would not be significant and public scoping meetings would not be necessary; however, scoping was conducted with concerned resource agencies.

Each scoping meeting began with an overview of the Corps' involvement in the environmental documentation for the proposed realignment of Forts Huachuca, Devens, and Monmouth, a review of the recommendations of the Secretary of Defense's Commission on Base Realignment and Closure and Public Law 100-526 mandates regarding environmental compliance, and presentation of the purpose, procedure, and schedule of the EIS process. Each meeting was then open for questions, comments, concerns, and opinions from the attendees as well as their suggestions on issues they believed should be considered in the document.

At the Sierra Vista meeting, 11 of the 58 attendees provided comments as summarized below:

- Public official, Cochise County; concerned about great impact on property tax base and homeowners, requiring increased taxes.
- Public official; since announcement of realignment, city has suffered severe tax base downturn, citizens must pay more for same services.
- Federal Civil Service employee, Sierra Vista; many of those moving may have to sell houses at a loss.
- Federal Civil Service employee, Sierra Vista; homeowners unwilling to spend money on house repair.

- Federal Civil Service employee, Sierra Vista; action could impact local transportation.
- Sierra Vista resident; questioned how Sierra Vista homeowners may qualify for Homeowners Assistance Program.
- Sierra Vista resident; questioned procedures and process of EIS.
- Sierra Vista resident; questioned decision-making process for Fort Huachuca realignment.
- Sierra Vista resident; was concerned generally about negative impact on region, questioned reasons for move.
- Sierra Vista resident; questioned rationale for realignment.
- Sierra Vista resident; stated that USAISC move threatens quality of MACOM and national security.
- Retired Army officer; questioned need and motives for realignment.
- Sierra Vista resident; questioned real costs of move, impact to Sierra Vista not considered.
- Sierra Vista resident; questioned justification for move, asked about compensation for people incurring losses.
- Sierra Vista resident; remarked on growth of negative feeling in community.
- Public official, Sierra Vista; noted language in Base Realignment and Closure Act addressing severe impacts, asked will this be applied.
- Sierra Vista resident; said that loss of families means loss of students and Sierra Vista just passed a school bond issue.
- USAISC, Fort Huachuca employee; noted great difference in income between those departing and those arriving and the effect on local economy.
- Sierra Vista resident; foresaw adverse economic impact of many USAISC professionals selling houses and moving or facing unemployment.
- Sierra Vista resident; was concerned about losing professionals, gaining lower salaried personnel, causing loss of spending.
- Retired Army officer, Sierra Vista; felt that realignment would uproot community causing socioeconomic problems.

- Public official, Cochise County; reluctance of investors to risk capital in Sierra Vista.
- Sierra Vista resident; said that bank assets were decreasing, will continue.
- Sierra Vista resident; believed move would affect quality of life, education, job loss will cause declining morale.

At the June 9, 1989 meeting in Ayer, Massachusetts, nine of the 44 attendees spoke. Concerns are summarized below:

- Representative of local Congressman; indicated his office available as liaison between residents and government.
- Representative of area Chamber of Commerce; characterized positive economic impact, willingness of region to work with the Army and associated employees.
- Ayer resident; said that if on-base housing has vacancies, civilian employees should be able to occupy these units.
- Ayer resident; concerned about socioeconomic impacts - arriving civilians could be repelled to northern Massachusetts or New Hampshire by costly real estate around Fort Devens.
- Chamber of Commerce representative; would impact to schools be discussed in the EIS.
- Two Ayer residents; asked about realignment impact to school population - one asked if incoming personnel would be directed to live in Ayer or be free to live where they pleased.
- Ayer resident; asked about new construction at Fort Devens.
- Ayer resident; asked about historic resources in Cantonment area, felt USAISC operations to cause less impact than Intelligence School training.
- Civilian employee/Ayer resident; requested compositional breakdown of leaving and arriving personnel, pay scale of arriving slots.
- Ayer resident; asked if incoming personnel would be required preference in residential location for planning purposes.

5.2 COMMENTS AND RESPONSES CONCERNING THE DRAFT EIS (DEIS)

The following sections present the comments received regarding the DEIS, which was available for review for more than 45 days throughout March and most of April 1990, and responses thereto. Comments were received by letter, telephone, and in-person at Public Hearings which were held in the communities of Fort Huachuca and Fort Devens on March 21 and 28, respectively. A Public Hearing was not required for the Fort Monmouth community because the expected effects of the realignment were regarded as insignificant. Appendix B contains copies of correspondence received and transcripts of the two Public Hearings. It should be noted that comments are written verbatim with only minor editing for spelling.

5.2.1 Written and Telephone Comments

COMMENTS FROM GILBERT D. METZ, ACTING FIELD SUPERVISOR, U.S. FISH AND WILDLIFE SERVICE, LETTER OF MARCH 15, 1990

- o The proposed action will create new missions at Fort Huachuca with the need for new facilities and changing land uses. While none of these will be located in prime Sanborn's bat habitat, thereby reducing direct impacts, we expect the new facilities may result in significant indirect impacts.

RESPONSE: Section 4.2.1.3 has been revised to more thoroughly discuss the projected impacts to the Sanborn's long-nosed bat habitat. Construction will not create a significant direct impact to the bat. Through informal coordination with the Fish and Wildlife Service, the Army has determined that no formal consultation pursuant to Section 7 of the Endangered Species Act is required for this action. Fort Huachuca will perform basewide surveys, proceed through the Section 7 process if required, and implement a management plan for Sanborn's long-nosed bat to ensure ongoing compliance of all range activities with the Act.

- o As described in the DEIS, Fort Huachuca is very involved with both operations and training programs. Suitable land to utilize for these programs is limited by a variety of factors. Placement of new facilities will necessitate adjustments in existing land use (both location and duration parameters) that could impact Sanborn's bat habitat.

RESPONSE: With the exception of the proposed structures within the cantonment area, there will not be any construction of facilities within the ranges. If current ranges are not sufficient for the Intelligence School activities, other range areas may be used for training. This impact is discussed in Section 4.2.1.3 of the Final EIS. Field training and operations will be modified as appropriate if such practices are determined to impact endangered species or its habitat.

- o We believe the DEIS for this project should explore all indirect impacts on Sanborn's bat. It may not be sufficient to keep base activities out of habitat areas only when bats are present. More stringent protection may be needed. Depending on the outcome of impact analysis, Section 7 consultation as required by the Endangered Species Act may be required.

RESPONSE: Section 4.2.1.3 of the Final EIS has been expanded to explore potential indirect impacts to the species. We do not project direct impacts to the bat from construction activities as a result of on-going operation activities at the installation. The installation will enter into Section 7 consultation with the U.S. Fish and Wildlife Service to determine and implement satisfactory mitigation measures as required, for indirect impact to the species as a result of ongoing operational activities at the installation. This will include entering into a Memorandum of Agreement to assure a time schedule and level of commitment to accomplish this effort.

COMMENTS FROM GORDON E. BECKETT, SUPERVISOR, NEW ENGLAND FIELD OFFICE, U.S. FISH AND WILDLIFE SERVICE, LETTER OF MARCH 14, 1990

- o The DEIS adequately addresses impacts to fish and wildlife resources for the Fort Devens segment of the proposal.

RESPONSE: Thank you for your comment; no response is required.

COMMENTS FROM SAM F. SPILLER, FIELD SUPERVISOR, U.S. FISH AND WILDLIFE SERVICE, LETTER OF MAY 23, 1990

- o On May 22, 1990, a meeting was held between the Fish and Wildlife Service (FWS) and the U.S. Army concerning the Base Realignment Project concerning Ft. Devens and Ft. Huachuca and potential effects to the endangered Sanborn's long-nosed bat (*Leptonycteris sanborni*). The FWS had raised some concerns regarding impacts to this endangered bat from both new and continuing operations on Ft. Huachuca. Much of the current operation of Ft. Huachuca is not in compliance with the Endangered Species Act.

Upon review of information presented during the meeting of May 22 and the commitments voiced by U.S. Army personnel in attendance and Colonel Jack B. Avant's letter to the FWS dated May 21, 1990, we concur with your finding of no effect on Sanborn's long-nosed bat from the Base Realignment project.

RESPONSE: Thank you for your comment. The text has been revised accordingly.

COMMENTS FROM ELIZABETH HIGGINS CONGRAM, ASSISTANT DIRECTOR FOR ENVIRONMENTAL REVIEW, U.S. ENVIRONMENTAL PROTECTION AGENCY, LETTER OF APRIL 11, 1990

- o In view of the fact that Fort Devens was included on the Superfund National Priority List - Federal Facility Sites on February 21, 1990, we recommend additional coordination with EPA's Region One Superfund Office concerning the proposed Fort Devens' activities relative to consistency with the "1989 Installation Restoration Program Plan for Fort Devens" and compliance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 ("CERCLA") as amended by the Superfund Amendments and Reauthorization Act of 1986 ("SARA").**

RESPONSE: The realignment action will not affect National Priorities List sites. Fort Devens will develop and coordinate remediation plan documents with EPA and will coordinate any other action affecting a site on the Priorities List.

- o We recommend that the Army coordinate with EPA Regional Offices during site specific realignment moves and construction/renovation activities to avoid potential impacts to hazardous waste cleanups, hazardous waste management, wetlands and sensitive/unique resources.**

RESPONSE: Site specific information is provided in the EIS. The realignment will not affect National Priorities List sites. Fort Devens installation staffs will coordinate with the EPA if any actions proposed at either location affect or will affect a site on the List, hazardous materials management, or wetlands and sensitive/unique resources.

- o Asbestos removal and disposal schemes should comply with the National Emission Standards for Hazardous Air Pollutants; Asbestos Standard (NESHAP) [found at 40 CFR Par 61 Subpart M].**

RESPONSE: An addition has been made to Section 4.8.2 of the EIS to reflect this compliance requirement.

- o Removal of underground storage tanks at Fort Devens and Fort Monmouth should be conducted in an environmentally sound manner.**

RESPONSE: The need for underground tank removal as a result of this proposed action has not been identified at Fort Monmouth or Fort Huachuca. Removal of underground storage tanks (USTs) at Fort Devens will be conducted in an environmentally sound manner as a matter of standard Army practice and regulation. The process is outlined below in the continuation of responses to this letter.

- o We believe that the Final EIS and ultimately the Record of Decision (ROD) should identify the Army's commitments to conduct additional studies and mitigation measures which are identified in the Draft EIS.

RESPONSE: We agree. The Final EIS has been edited to reflect the Army's commitment to perform surveys as required.

- o We also encourage the Army to consider realignment alternatives which will maximize and preserve the long-range environmental benefits of their Fort Huachuca holdings. For instance, the Army should consider agreements with resource agencies (e.g., U.S. Fish and Wildlife Service, and State Fish and Game Departments) in order to provide for management and protection of sensitive and especially valuable habitat and natural resources. If this cannot be accomplished, EPA suggests that protection and preservation of existing wetland and riparian resources and other valuable habitat be stipulated as a condition of the realignment.

RESPONSE: Fort Huachuca is currently in the process of developing an endangered species management plan in conjunction with necessary habitat surveys and analyses. This is consistent with ongoing coordination with the U.S. Fish and Wildlife Service and the Arizona Department of Game and Fish concerning the long-range environmental management and protection of especially valuable habitat and natural resources as a matter of standard installation practice. The installation will provide for protection of the sensitive habitat as required by law.

- o Based on our review of the Draft EIS, the supporting documents for the individual Bases, and in accordance with our national EIS rating criteria, a copy of which is enclosed, we have rated this Draft EIS EC-2 (Environmental Concerns — Insufficient Information).

RESPONSE: We have provided responses to the concerns by revising in order to supply the needed information. Also see Table S-3 for a summary of commitments.

- o The Draft EIS states on page 63 that "In July 1989, Fort Devens and the Sudbury Training Annex were proposed for listing on the EPA Superfund National Priorities List (NPL) for hazardous waste sites. Forty-six potential hazardous waste sites were recorded. These sites include the explosive ordnance disposal range, a sanitary landfill, and a building used to store battery acids, PCBs (polychlorinated biphenyls), pesticides, and solvents". As you are now aware, on February 21, 1990, Fort Devens and the Sudbury Training Annex were placed on the EPA Superfund National Priorities List - New Federal Facility Sites.

As you know, the entire Fort Devens is included on the National Priorities List with the base perimeter defining the NPL site boundaries. As discussed in a telephone conversation and meeting between EPA staff and members of the New England Division

of the Corps, close coordination during design of the new facilities and construction activities is required to assure compliance with CERCLA as amended by SARA. However, based on information contained in the Draft EIS and the Fort Devens Support Document we do not foresee any of the proposed realignment activities at Fort Devens as interfering with the contaminated portions of the Base. In addition, we understand that the proposed realignment activities at Fort Devens will be consistent with the "1989 Installation Restoration Program Plan for Fort Devens" prepared by the U.S. Army Toxic and Hazardous Materials Agency (USATHMA).

Table S-2 Compliance with Environmental Statutes, page S-4 of the Draft EIS, should list the Resource Conservation and Recovery Act (RCRA), as well as the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 ("CERCLA") as amended by the Superfund Amendments and Reauthorization Act of 1986 ("SARA").

RESPONSE: Table S-2 has been modified as requested.

- o EPA is concerned that the proposed realignment activities may effect on-going hazardous waste management and hazardous waste cleanup programs at Fort Huachuca. In our opinion, the Final EIS should describe in greater detail the consistency of realignment activities with Fort Huachuca's current hazardous waste management and cleanup programs. We also recommend that the Final EIS discuss potential impacts to Base environmental staffing, funding, and compliance schedules. Realignment activities at Fort Huachuca must not be allowed to affect the proper management of hazardous waste or correction of violations. Finally, we recommend close coordination of Base environmental staff, EPA, the Arizona Department of Environmental Quality, and those responsible for realignment and construction activities.

RESPONSE: We do not anticipate any impact to on-going hazardous waste management and hazardous waste cleanup programs at Fort Huachuca. The type and level of hazardous wastes associated with the realignment activities will not change nor increase significantly. Construction activities will not affect any cleanup programs at Fort Huachuca.

- o World War II era buildings containing asbestos will be demolished at Fort Devens and Fort Monmouth. According to the Fort Devens Support Document, Fort Devens has established an asbestos control program in compliance with Army, Occupational Safety and Health Administration (OSHA), EPA and Massachusetts Department of Environmental Protection regulations regarding the handling of asbestos. The Fort Monmouth Support Document states that asbestos removal on Base is handled on a case by case basis depending on type. While the Draft EIS contains an acknowledgement of "Federal and State regulations" regarding asbestos, we believe it is more appropriate to cite EPA as the federal agency regulating the removal of asbestos from demolitions and renovations under the National Emission Standards for Hazardous Air Pollutants: Asbestos Standard (NESHAP), found at 40 CFR Part 61 Subpart M, as well as specific state and local regulations.

RESPONSE: No demolition will occur at Fort Monmouth as a result of realignment, although this could occur in association with other installation activities. In any case, the text has been modified to state that removal will follow EPA regulation.

- o It is a requirement of the NESHAP Asbestos Standard that asbestos be removed from any building prior to demolition. The NESHAP Asbestos Standard also requires written notification to EPA before asbestos removal work starts. Written notice to state environmental or health agencies is often a requirement of state regulations. Work practices must be followed which are designed to eliminate emissions of asbestos to the ambient air, and the material must be disposed of at a properly operated landfill. According to the Draft EIS, Fort Monmouth currently has a contractor dispose of asbestos material off-site. The Draft EIS also states that Fort Devens currently disposes of asbestos material at the Fort Devens Landfill, but following closure of the Base landfill in 1991 a contractor will handle asbestos disposal. You should be aware that the NESHAP Asbestos Standard holds the owner of a facility and the operator of a facility responsible for compliance with the Standard. This means that proper disposal of asbestos is the responsibility of the Army not just the contractor. Finally, we recommend that Federal and State regulations pertaining to asbestos removal be attached to the demolition/renovation construction plans and specifications.

RESPONSE: This requirement is acknowledged. The Army will be responsible for proper disposal.

- o We recommend that the Final EIS outline the tank removal process for Fort Devens and apply the same process for tank removal at Fort Monmouth. The removal plan should address the following questions:

RESPONSE: A plan for removal of the UST's is being developed. The following responses are preliminary. Section 4.8.2 has been expanded to describe in detail the underground storage tank removal and disposal at Fort Devens. The installation would develop a plan as needed if removal is required in the future. Realignment at Fort Monmouth will not create the need for remediation of underground tanks.

- How will the contents of the tanks will be removed and disposed of?

RESPONSE: Tank contents will be removed and disposed of in compliance with applicable Federal and state regulations.

- What procedures will be used to test the tanks for leakage?

RESPONSE: The tanks will not be tested for leakage; soils will be evaluated for contamination during the removal process.

- If leakage exists what soil and groundwater investigations will be conducted?

RESPONSE: Where leakage is identified, soils will be tested in the laboratory for total petroleum hydrocarbons; only No. 2 oil is stored in the tanks.

- What parameters will soils (and possibly groundwater) be analyzed for?

RESPONSE: Total petroleum hydrocarbons; no other contamination is suspected. Soil contamination is addressed above in the preceding comment response and in Section 4.8.2. Groundwater contamination is not anticipated, but if found will be addressed as part of tank removal and disposal procedures.

- What method of soil testing (i.e. visual, field gas chromatography, etc.) will be used following excavation of tanks?

RESPONSE: A photo-ionization detector will be used to measure soil concentrations during excavation.

- How sensitive will these methods be to detection of fuel and other stored liquids in surrounding soil?

RESPONSE: The photo-ionization detector measures concentrations to less than 10 ppm.

- To what levels of contamination will soils and or contaminated groundwater be removed?

RESPONSE: The action level is 100 ppm total petroleum hydrocarbons.

- Special back filling requirements, capping (cover design) or monitoring requirements if some level of soil contamination is left in place.

RESPONSE: Capping will be completed following excavation using standard compacted backfill. Contaminated soils are expected to be removed as addressed above.

- o Measures to minimize the environmental effects at Fort Devens include survey and remediation efforts associated with potential asbestos problems in existing buildings and underground petroleum tank leakage.

RESPONSE: Section 4.8.2 has been edited to discuss these remediation efforts. The measures are being considered as part of the Final EIS, and these environmental commitments will be part of the ROD.

- o Construction activities and increased activity on the ranges could cause erosion impacts if heavy rains and summer thundershowers occur. The Final EIS should include more information on the actual possibility of erosion and the consequences of this erosion. Although heavy rain is infrequent, erosion control measures should be implemented to ensure these impacts do not occur.**

RESPONSE: The potential for erosion is considered low especially since the increased range activity will not require any significant clearing of vegetation. Erosion will be reduced to nonsignificant levels for construction activities through erosion control techniques such as revegetation, contour grading and sandbagging if required.

- o Biological surveys of sensitive resources (e.g., wetlands, riparian areas, unique vegetation) should be completed prior to the Final EIS. The results of these surveys should be included in the Final EIS with a discussion of potential activities in these areas and possible impacts.**

RESPONSE: The Fort Huachuca and Fort Devens construction areas have been surveyed and those results are incorporated both within the Draft and Final EIS. Surveys are being initiated within the range areas at Fort Huachuca and will be coordinated with the U.S. Fish and Wildlife Service and other concerned agencies as part of ongoing installation environmental coordination responsibilities. These actions and coordination are separate from the realignment action.

- o Cumulative impacts to sensitive habitats (e.g., freshwater marshes, unique vegetation), water quality, and wildlife from increased range use at Fort Huachuca should be discussed in the Final EIS. Address potential impacts from past present, and reasonably foreseeable future projects.**

RESPONSE: We have added additional information in Section 4.2.1 of the Final EIS. Construction sites have already been surveyed and no sensitive areas are impacted. Other areas of direct and indirect use will be surveyed on a programmatic basis in accordance with phasing in of additional range use.

- o The Final EIS should describe the specific enforcement and regulatory measures which will be used to ensure effective implementation of air quality, erosion, water quality, and biological mitigation measures (Section 3.0 - Environmental Analysis and Mitigations, Supplemental Information for Fort Huachuca Realignment).**

RESPONSE: Section 4.1 and Section 4.2 have been modified to provide more information on the regulatory measures to insure compliance. In general these measures center around the preparation and implementation of memoranda of agreement or programmatic agreements, and execution

of required agency coordination in the case of the Endangered Species Act to assure compliance.

- o Regarding Fort Huachuca, to insure adequate supply and quality of water, close monitoring of the water table and chemical testing of the water should be conducted.

RESPONSE: Agreed. Fort Huachuca is currently monitoring water supply and quality. These measures have been included both in the Draft EIS as well as the Final EIS. (Also, see response to comment letter from Gilbert D. Metz, U.S. Fish and Wildlife Service, above; and Section 4.1.1.2.)

- o Regarding Fort Huachuca, a detailed geological study would be required to determine design criteria for foundation and slope stability.

RESPONSE: These mitigation measures have been included in the Final EIS.

- o The Final EIS should describe existing Fort Huachuca flood control facilities and the potential impact of increased impervious surfaces on these facilities. We urge the Army to commit to the Draft EIS recommendation that engineering of flood control facilities be designed into every construction project.

RESPONSE: This mitigation will be committed to through the provision of specifications within engineering and construction documents. See response to letter from Gilbert D. Metz U.S. Fish and Wildlife Service, above; and Section 4.1.1.2.

- o Because of the sensitive and unique habitats of Garden, Huachuca, Sawmill, and Blacktail Canyons, we urge the Army to commit to avoidance of activity in these areas of Fort Huachuca. We recommend that management plans for these areas be developed and included in the Base Natural Resources Management Plan and Base Comprehensive Plan.

RESPONSE: Training activities will be oriented away from sensitive and unique habitats in these areas in compliance with existing and future management plans.

- o Regarding Fort Huachuca, prior to initiation of use of any new area, directed biological surveys and habitat evaluations will be conducted for all listed or candidate species.

RESPONSE: This mitigation measure has been provided in the Final EIS.

- o Fort Huachuca is currently developing a management plan for the Sanborn's long-nosed bat. We recommend that the Army finalize and implement the endangered Sanborn's long-nosed bat management plan prior to increase use of the Fort Huachuca ranges. The Final EIS should describe the status of Section 7 Consultation with the U.S. Fish and Wildlife Service.

RESPONSE: Section 4.2.1.3 has been revised to discuss the status of Section 7 consultation. The Army, in coordination with the U.S. Fish and Wildlife Service, has determined that formal consultation is not required for the realignment action.

- o The Army should continue to have the USAEHA conduct environmental noise assessments and update noise contours at Fort Huachuca as required by Army regulations (AR 200-1).

RESPONSE: These assessments will be updated as changes in operation at Libby Army Airfield occur; however, there are no planned changes at Libby due to these actions.

- o Prior to demolition of the World War II buildings, they must be inspected for asbestos and any associated underground storage tanks should be inspected for leaks.

RESPONSE: Section 4.8.2 has been edited to discuss asbestos removal and inspection of underground storage tanks.

- o A program of trash separation and recycling for Fort Huachuca should be encouraged to reduce waste materials disposed of at the landfill. Although the projected increase in solid waste is not expected to be great, the regional landfill has a projected lifespan of only four years. Therefore, even a slight increase in solid waste may be a significant impact.

RESPONSE: This mitigation measure will be implemented as a portion of post operations. A commercial vendor is building a solid waste recycling facility at the existing landfill to handle the expected material.

COMMENTS FROM NATHANIEL DEXTER, CHAIRMAN, MONTACHUSETT REGIONAL PLANNING COMMISSION, LETTER OF MARCH 30, 1990

- o At the monthly meeting of the Montachusett Regional Planning Commission held on Tuesday, March 27, 1990, members discussed the Draft Environmental Impact Report for the planned base realignment activities at Fort Huachuca, Arizona; Fort Devens, Massachusetts; and Fort Monmouth, New Jersey. The Commission voted to find the report in conformity with regional goals, policies, and objective subject to abutting municipalities' approval.

RESPONSE: Thank you for your comments; no response is required.

COMMENTS FROM ROBERT E. GASSER, COMPLIANCE COORDINATOR, ARIZONA STATE PARKS, FOR SHEREEN LERNER, PH.D., STATE HISTORIC PRESERVATION OFFICER, LETTER OF MARCH 26, 1990

- o I note that Statistical Research has conducted a sample survey of approximately 15 percent of the base area of Fort Huachuca and that survey resulted in the location of 58 prehistoric sites as well as historic sites. The EIS also states that the base archaeologist, Marie Cottrell, surveyed most of the areas proposed for new construction as a result of the base realignment. I also note that the EIS recognizes that the historic district at Fort Huachuca is a National Historic Landmark.

The EIS also states that any additional areas where construction will be needed will be surveyed and that the Section 106 procedures will be complied with.

We have heard about the proposed base realignment activities at Fort Huachuca but have not been formally consulted pursuant to 36 CFR 800.4 or 800.5. In my opinion, the draft EIS does not constitute formal consultation for Section 106 purposes. In order to bring this project into compliance with Section 106, all areas of proposed impact should be surveyed (including all new construction and training areas) and we should be supplied with detailed information about proposed projects along with maps of proposed impact areas. In addition, we require copies of the archaeological survey reports and a request for consultation from the agency (or Fort Huachuca) based upon the submitted documentation.

RESPONSE: Although new range areas are not yet defined, a programmatic agreement will be executed as appropriate between the installation and State Historic Preservation Office (SHPO) to assure full surveys and compliance with Section 106 (see Appendix D).

- o The proposed base closure will probably also result in increased training activities at Fort Huachuca, some of which may be on-going and not clearly definable at this time. You may want to consider developing a Memorandum of Agreement (MOA) for proposed new construction and training activity areas at the Fort.

RESPONSE: An Army-wide Programmatic Agreement as shown in Appendix D has been developed as a basis for Memoranda of Agreement (MOA) between installations and State Offices of Historic Preservation to assure full compliance with Section 106. Fort Huachuca has initiated consultation with the State of Arizona Office of Historic Preservation regarding the development of MOA before commencement of training associated with the realignment.

COMMENTS FROM LAWRENCE SCHMIDT, DIRECTOR, OFFICE OF PROGRAM COORDINATION, STATE OF NEW JERSEY, DEPARTMENT OF ENVIRONMENTAL PROTECTION, LETTER OF MARCH 13, 1990

- o Please note that the DEIS discussed possible construction impacts to Squire Hall, which is located within the proposed Fort Monmouth National Historic District (4.4.3). Please revise this section to state that "Any plans for external modifications...will be coordinated with the New Jersey State Historic Preservation Officer (NJSHPO).**

RESPONSE: This change has been made to the text.

COMMENTS FROM THE HONORABLE DENNIS DE CONCINI, UNITED STATES SENATOR, ARIZONA, LETTER OF APRIL 27, 1990.

- o Enclosed please find a letter [dated November 30, 1989] I sent to Secretary of Defense Richard Cheney regarding the proposed move of the Army's Information Command System (ICS) from Fort Huachuca, Arizona to Fort Devens, Massachusetts. I respectfully request that this letter be included for the record in the Environmental Impact Statement being conducted by the Corps of Engineers on the proposed move.**

RESPONSE: The referenced letter to the Secretary of Defense has been included in Appendix B; however, its enclosures are not included because they are not for public release.

COMMENTS FROM STEPHEN M. BURRINGTON, STAFF ATTORNEY, CONSERVATION LAW FOUNDATION OF NEW ENGLAND, LETTER OF APRIL 16, 1990

- o As the draft EIS points out, water quality problems in the Nashua River have abated to some extent in recent years but have not diminished to the point of insignificance. It is not possible to tell from the draft whether the wastewater treatment plant at the base contributes to those problems. (Id.) The decrease in the population residing on the base as a result of the realignment, and the corresponding reduction in wastewater flow, could reduce the effectiveness of the treatment plant, and, on the other hand, could provide an opportunity to reduce impacts by upgrading the treatment system.**

RESPONSE: The wastewater treatment system at Fort Devens consists of 3 Imhoff tanks and 22 infiltration beds which make it adjustable to flow variations. This system is adaptable so a reduction in flow quantity associated with realignment would not reduce flow effectiveness of treatment. Since wastewater effluent is discharged into settling basins for percolation into groundwater and not into surface water, NPDES regulations under Section 402 of the Clean Water Act do not apply.

- o** We therefore request that the EIS provide the following additional information. First, it should provide a detailed summary of all NPDES permit violations at the plant during the past year, if any violations have occurred. It should also summarize any remedial measures that have been discussed with, or recommended or ordered by, federal or state regulatory agencies in connection with the violations. Second, the EIS should describe in greater detail all water quality violations that have been recorded in the vicinity of the treatment plant outfall and describe what loadings from the treatment plant contribute to those violations, even if the plant has been operating within the relevant effluent limitations (for example, nitrate nitrogen or BOD) in its permit.

RESPONSE: Since wastewater effluent is discharged into settling basins for percolation into groundwater and not into surface water. Fort Devens has applied for a Massachusetts Ground Water Discharge Permit, but the permit has not been granted due to the exceedance of nitrates. The permit is being discussed between Fort Devens and the Massachusetts Department of Environmental Protection.

- o** Third, the EIS should provide an estimate of the new daily flow to the treatment plant after the proposed action has been completed, and state whether the decrease in flow, if any, could affect the efficiency of the plant. Finally, if the plant has been violating its NPDES permit or contributing to violations of water quality standards, or if changes in flow due to realignment might cause it to do so, it is important for the EIS to examine alternative methods of wastewater treatment for the new population level at the base.

RESPONSE: Standards set for NPDES permits under Section 402 of the Clean Water Act do not apply to the treatment plant. No NPDES permit is required. No problems are associated with the plant discharge except that the drinking water standards for nitrates is exceeded. This will not be adversely affected by realignment.

- o** In light of what seems to be a potentially serious groundwater contamination problem associated with the landfill at the base, we urge that the relationship between that existing problem and the realignment of base activities be given somewhat greater consideration in the EIS. The description of the affected environment should briefly explain what measures, if any, are planned or under consideration to prevent further degradation of groundwater quality. Consideration should be given to ways of mitigating adverse impacts of solid waste disposal associated with the realignment, such as by having source reduction or recycling programs in place when new base activities get underway.

RESPONSE: The proposed realignment will not significantly affect activity at the landfill. A long-term decrease in solid waste disposal is expected.

- o** Fort Devens has now, of course, been added to the Superfund List. See 54 Fed. Reg. 48,184, 48,187 (1989). In light of the evident seriousness of the contamination at

the hazardous waste sites on the base, we urge that the discussion in Sections 3.8.2 and 4.8.2 of the EIS be expanded considerably. Every hazardous waste site that may be affected in any way by realignment activities should be described in detail, along with the current status of remedial actions and planning for further remedial actions. The EIS should explain how the timetable established by Section 120 of the Superfund Amendments and Reauthorization Act of 1986, 42 U.S.C. Paragraph 9620(e), will be coordinated with the schedule for base realignment activities, and, in particular, what measures will be taken to minimize the risk of exposure to the environment, the public and Air Force personnel as clean-up and realignment activities occur.

RESPONSE: The realignment will not affect Superfund sites. The FEIS has expanded discussion of existing hazardous waste conditions in Section 3.8.2. Cleanup will be addressed along with opportunities for public participation in the Installation Restoration Program documents. These documents will address risk of exposure to the environment, the public, and Fort Devens personnel.

- o The draft EIS takes an overly-sanguine view of the impacts associated with what will be a significant increase in traffic due to the larger number of personnel residing off base. Traffic congestion is an ever-growing problem in eastern Massachusetts, with serious air quality, water-quality, land-use and noise impacts. The EIS should include a traffic study that takes into account projections for traffic increases in the entire area affected by the base. Whether or not significant increases in congestion are projected, the EIS should consider ways of mitigating traffic impacts through the establishment of shuttle services, ride-sharing programs, measures to encourage housing development in optimal locations, and so on. The population of employees at the base appears to provide major opportunities to use proven methods of minimizing vehicle miles travelled, and we strongly urge the careful examination of those opportunities.

RESPONSE: The projected increase in traffic of Fort Devens due to realignment is not expected to exceed the capacity of the access roads. The increase in vehicle trips will be about 6 percent which is not considered significant. Traffic reduction methods at the Fort are available and could be implemented if problems develop in the future. The Directorate of Engineering and Housing (DEH) at Fort Devens is working with the state on improvements to the Route 2 interchange and with the state.

COMMENTS FROM JOSEPH D. SPOUND, SPOUND DEVELOPMENT ASSOCIATES, LETTER OF MARCH 28, 1990

- o As far as we can see this project will not have any negative impact on the area; on the contrary, it would appear to be a logical and appropriate use of the land with a significant benefit to all.**

RESPONSE: Thank you for your comment; no response is required.

COMMENTS FROM JOSEPH E. PATZ, LETTER OF MARCH 24, 1990

- o 3.2 Biological Environment - 3.2.1.1 Vegetation/3.2.1.2 Wildlife: No mention is made of the effect that increased troop and range activity will have on the vegetation and wildlife in those areas.**

RESPONSE: You are correct since the quoted sections refer to the affected environment and not the impact analysis. Section 4.2.1 of the Draft EIS provides the requested analysis.

- o 3.3 Socioeconomic Environment: 3.3.1.3 the housing cost estimate uses average housing price of housing owned by USAISC personnel in the city of Sierra Vista, which does not include employees living in the city of Tucson. 3.3.2.3 uses median price of housing as a comparative figure. The geographic bounds of the regions studied are not defined.**

RESPONSE: The region studied was Cochise County. Tucson was not included since the vast majority of impacts to housing would be within the County.

- o 3.4 Cultural Resources: The EIS makes no mention of the impact which the increased USAICS troop activity will have upon these resources.**

RESPONSE: Section 4.4 in the Draft EIS does provide the analysis of this potential impact.

- o 3.5 Noise - 3.5.2 Fort Devens: Will weapons training activities on ranges cease, other than for the qualification of HQ USAISC personnel? Will this change the unacceptable noise level contours to within the limits of the post?**

RESPONSE: Weapons training activities on the ranges will continue with no reduction in noise levels, as National Guard and Army Reserve troops will continue to fire mortars and the Moore Army Airfield will continue to be used.

o **3.9 Utilities and Public Services -**

Fort Huachuca 3.9.1.5/4.9.1.5: Public Services and Safety: no consideration is given to the additional fire danger created by increasing the number and size of maneuvers conducted on the ranges. No mention is made of the capability of the Raymond W. Bliss Army Community Hospital to handle the approximately 1,500 military personnel increase the USAICS move will bring with it.

RESPONSE: The increased potential for range fires has been added to section 4.9.1.5. Thank you for bringing this omission to our attention. As described in Section 4.9.1.5, there will be an increased requirement for medical care on-post. Actions unrelated to the realignment are being undertaken to provide additional medical staff to Fort Huachuca.

Fort Devens 3.9.2.1 Water Supply: No mention is made of the ability of the groundwater wells to support the requirements which additional personnel added to the post population by the USAISC move will bring. What is the purity of the groundwater based upon the soil contamination indicated in 3.8.2, the discharge of wastewater into the groundwater supply in 3.9.2.2 and the possible leachate infiltration from solid waste disposal in 3.9.2.4.

RESPONSE: The addition of approximately 200 personnel on-post during the day will not significantly increase the demand for potable water from the installation wells. The four wells on-post can adequately supply future demand for potable water. The installation well monitoring program did find organic and metal contamination immediately adjacent to the landfill. However, there was no indication of associated groundwater contamination of a well 20 feet outside of the landfill or at other contaminated sites on-post. Treated effluent from the wastewater treatment facility at Fort Devens is discharged to treatment beds near Moore Army Airfield; no discharge to the groundwater occurs. The Massachusetts Correctional Institute in Shirley, MA discharges wastewater into groundwater. No increase in the amount of wastewater treated by this plant will occur from realignment.

Fort Devens operates a waste transfer station where the domestic solid waste collected on-post is stored until transported for off-post disposal. Solid waste storage and transfer activity will not change as a result of realignment.

3.9.2.4 Solid Waste Disposal: There has no alternative disposal site selected to replace the current landfill after its closure in December 1991. Since landfills in surrounding areas have been capped, will there be a problem with waste disposal at Fort Devens after December 1991? Will the increased requirement to transport solid waste after December 1991 create additional problems with hazardous waste handling and increase the probability of increased groundwater and resource contamination.

RESPONSE: The waste transfer station operated by Fort Devens will continue to operate after the closure of the installation's landfill (December, 1991). The transportation of the solid waste will not increase the possibility of groundwater and resource contamination.

o 4.1 Physical Environment -

Fort Huachuca - 4.1.1.3 Geology: Are the Structures to be built on Fort Huachuca being constructed considering the shifting nature of the sedimentary pediment that would take place during a magnitude 7.0 earthquake.

RESPONSE: Yes. A mitigation measure in this section commits all construction projects to be designed with this seismic consideration.

Fort Devens - 4.1.2.2 Hydrology and Water Quality: This does not take into consideration the impact of the increase of personnel living off-post and increasing the demand upon the municipal water systems surrounding Fort Devens.

RESPONSE: The increase in off-post personnel will not be sufficient to significantly increase demand upon municipal water supply in the Fort Devens region. Also, water supply facilities in the area are not presently operating near capacity.

o 4.2 Biological Environment -

4.2.1.1 Vegetation/4.2.1.2 Wildlife: No mention is made to the effect that increased range operations and personnel will have upon the San Pedro Riparian National Conservation Area. This area which forms the eastern border of the east range was established by Congress to preserve one of the few existing examples of riparian area remaining in southern Arizona. Disturbance to the freshwater marshes or riparian woodlands within the perimeters of the post by increased range use can have an exponential effect upon the resources and wildlife habitats which currently exist on the San Pedro River.

RESPONSE: Since this area is off-post and the mitigation measures provide for the avoidance of activities within riparian areas, we do not foresee any significant direct or indirect impacts to this area due to the realignment activities.

4.2.2 Fort Devens - 4.2.2.1 Vegetation: States the realignment is not expected to impact the aquatic ecosystems surrounding Fort Devens, etc. What about the discharge of wastewater into the groundwater referred to in paragraph 3.9.2.2.

RESPONSE: The discharge referred to in paragraph 3.9.2.2 is from regional, not installation facilities. Realignment will not cause a significant increase in discharge from regional facilities.

o **4.3 Socioeconomic Environment -**

4.3.1.2 Population and Employment: What effect will the overall regional population increase of 1,348 have upon the service, recreational and conservation areas in the Cochise County area. What effect will the lower average income of this increased population have upon the property and sales tax bases and other revenue generating levies. Because of the transient nature of the incoming students, who tend to rent apartments rather than buying a home and will be buying fewer durable goods locally, will the residents of Sierra Vista be faced with higher tax rates to maintain the municipal services existing now.

RESPONSE: The socioeconomic impacts of this proposed realignment are provided within Section 4.3 of the Final EIS.

4.3.1.4 Real Estate and Property Values: With a net decrease of 900 military and civilian permanent party personnel, along with the decrease in the average salary, is it a valid assumption that there will be an increase of 167 units of owner occupied dwellings and a decrease of 444 units of renter occupied dwellings. The draft EIS further states that the overall net effect of the realignment action will be substantial in demand for owner-occupied housing. Is this a valid statement.

RESPONSE: This assumption was revised in the Final EIS. In fact, there will be a substantial decline in owner-occupied residential dwellings.

4.3.2.2 Populations and Employment: The EIS states that the employment in the four county area around Fort Devens is expected to increase by 3,605 people and regional sales by \$412.8 million, both figures are considered not to be significant for Massachusetts. How significant are these figures for economically depressed Cochise County.

RESPONSE: As described in Section 4.3.1, we project significant adverse economic impacts in Cochise County due to the proposed realignment.

4.3.2.3 Changes in Economic Trends: The charts detail the tax revenue gains to Massachusetts from the realignment, which the report considers insignificant. Why was the same form not used to portray the revenues losses to the State of Arizona and Cochise County.

RESPONSE: This section has been revised in Section 4.3.1 of the Final EIS.

4.3.2.4 Real Estate and Property Values: This paragraph states that the realignment will result in an increased demand for only 6 owner-occupied units in Massachusetts,

is this figure valid in light of the fact that 2,131 civilian positions will be gained by Fort Devens.

RESPONSE: This figure was determined not to be valid. A revised Section 4.3.2 has been provided in this Final EIS.

4.3.2.5 Schools: In light of personnel gains is the expectation that school enrollment in the four county area around Fort Devens will decrease by 13 pupils and the Ayer School System is expected to decrease by 260 pupils?

RESPONSE: The revised Section 4.3.2.5 projects a substantial increase in school enrollment, although a decrease in the Ayer Public Schools is still a potential.

- o **Cultural Resources - 4.4.1 Fort Huachuca:** Will the mitigation of impacted cultural resources follow the same path that has been historically followed at Fort Huachuca? An example being the Apache Scout quarters, which were historical structures destroyed in 1983 over a weekend then the destruction announced on the following Monday.

RESPONSE: A Memorandum of Agreement between the installation and the State Historic Preservation Officer will be formulated and executed to provide for surveys and mitigation as required under Section 106 of the National Historic Preservation Act prior to implementation of new training activities associated with the realignment.

- o **4.6 Traffic - 4.6.2 Fort Devens:** The traffic volume increases (on-post) are stated as expected to 11 to 14 percent, yet the report states that this increase is not considered significant.

RESPONSE: This impact is not considered significant since the roadways would be operating below capacity even with this increase.

- o **4.7 Aesthetics and Recreation - 4.7.1 Fort Huachuca:** There is no mention of the effects that the increased transient military population will have upon the San Pedro Riparian National Conservation Area.

RESPONSE: We do not project any impact to this area since no direct or indirect disturbance is anticipated as a result of the realignment.

COMMENTS FROM CHARLES C. SMRZ, LETTER OF MARCH 23, 1990

- o I was one of the people that attended the public-meeting on the impact the transfer to and from Fort Devens will have on our community. I don't remember Col. Charles

Thomas making any statement that the Army may have predicted a bleaker economy than will occur because of the move, as was stated in the Sierra Vista Herald on Wednesday, March 22, 1990. It seems he has already made up his mind on our position before even looking at what the people said at the meeting. It seems ever since the initial announcement of the move they had already had their minds made up as to what they want. In reality we are the scapegoats of someone in the Fort Devens area that is protecting his or her interests and using us as a means to achieve their goals. It's a case of "Why fix it if it ain't broke."

RESPONSE: As stated in the Draft EIS, the alternatives to this action are quite limited due to the requirements of Public Law 100-526.

- o Three years ago when we moved out here the City was alive with ambition, we were to get a Medical Center on Fry Boulevard and Coronado and there was talk of a mall coming up on Route 92 and as soon as the announcement about the transfer came everything was canceled. And I understand there are 600 homes for sale in the area, and I understand your new people are not the home buying type. How much more do you need to see what type of problems the move created? The whole area came to a standstill because of the move.

RESPONSE: Since no issues of EIS adequacy are raised, no response is required, although your comment is noted for the record.

- o As a retired person I came out here because of the climate and peaceful surroundings we have here. I like a Military town because it usually has a dignity about it that goes with the discipline of the Military. I am a WWII veteran with eight months overseas and have a great pride in our country, but I have to be ashamed of the way things are being manipulated to suit the interests of a few.

RESPONSE: Since no EIS adequacy issues are raised, no response is required.

- o Since we are the only ones that are being hurt by the move doesn't it become clear as to why we are in this dilemma? We want a right to protect our property values and our environment. As one speaker said at the meeting, "the whole thing stinks."

RESPONSE: Since no EIS adequacy issues are raised, no response is required.

COMMENTS FROM JACK PENKOSKE, LETTER OF MARCH 23, 1990

- o **PUBLIC HEARING.** A public hearing was conducted in Sierra Vista, AZ on 21 Mar 90. There was no publicity to the general public or the affected work force until 20 Mar 90. Since the hearings are a required part of your process, the lack of advance notice can be attributed either to incompetence or a preconceived attempt to minimize attendance. Why didn't the publicity begin at least two weeks prior to the hearing?

RESPONSE: The public hearing was well advertised and publicized well in advance. We are sorry you did not learn of this event until the day before.

- o **HAZARDOUS WASTE SITES AT FORT DEVENS, MA.** The Fort Devens Sudbury Training Annex has at least 11 contaminated areas with explosive residues, chemical laboratory wastes, oil lubricants and other toxic materials. An estimated 35,700 people obtain drinking water from public and private wells within three miles of these waste areas and one private well is only 1,600 feet away. At least 46 hazardous waste sites have been identified at Fort Devens containing pesticides, battery acids, PCBs, solvents, toxic metals and many other hazardous materials. Drinking water for Fort Devens employees and Ayer, MA residents is within three miles of these contaminated areas. Will all of these problems be completely corrected before even one Fort Huachuca employee is moved to Fort Devens? Since the Department of the Defense is mandating this move, will the federal government assume liability for any illnesses (or deaths) suffered by Fort Huachuca employees or family members who will be required to live and work in this contaminated area?

RESPONSE: The pre-existing hazardous waste problem areas are not the result of the realignment. The realignment will not affect any sites identified. All hazardous waste areas posing an imminent health risk will be remediated.

- o **HOMEOWNERS ASSISTANCE PROGRAM (HAP):** From the time the move was first announced, we were assured by Mr. Jerry Lease's office in the Washington, D.C. Corps office that if the market conditions require implementation of HAP, employees in organizations at Fort Huachuca not affected by the move would be entitled to HAP. Just this week, the Corps has done a complete about-face and has indicated these employees would not be entitled to HAP. Since it is very likely that HAP will be implemented in Sierra Vista in the future, the impact of this reversal by the Corps is staggering. Many Fort Huachuca employees, both military and civilian, in organizations not affected by the move, will now suffer a significant monetary loss when they sell their homes.

RESPONSE: The Corps' Los Angeles District is aware of the great sensitivity concerning HAP in the Fort Huachuca community. The District has requested clarification of program eligibility requirements from the Office of the Chief of Engineers. The District will continue to provide information, as it becomes available, to will insure that Federal employees in the Fort Huachuca community are fully informed concerning all aspects of HAP eligibility and implementation.

- o **FINANCIAL LOSS TO HOMEOWNERS:** Civilian employees directly affected by the move will have an entitlement to DARSE and both civilian and military employees will have an entitlement to HAP if market conditions permit. The EIS, however, severely under estimates the financial impact on homeowners. It would be naive for anyone to assume that there will not be some financial loss for those of us selling homes in Sierra

Vista. In addition, the more significant financial damage will be realized at the Fort Devens end. I have travelled to the Fort Devens area three times in the past year. I can assure you that in order to buy a house of comparable size in Massachusetts or New Hampshire to the one we have now in Sierra Vista will cost approximately \$100,000 more than our current house. Therefore, employees moving to Fort Devens will suffer financial hardship at both ends and in addition will be forced to purchase homes of lower quality and size.

RESPONSE: Section 4.3.1 of the Final EIS has been revised to project a significant reduction in the number of owner occupied homes in Cochise County. There is no provision in HAP or DARSE to pay compensation based on a higher housing cost in the area to which a federal employee is relocating.

COMMENTS FROM M. GLEN AND SUSAN J. FINELSEN, LETTER OF APRIL 6, 1990

- o We have written several letters to the Arizona congressional delegation identifying and reiterating the numerous data flaws, inconsistencies, the overall illogical nature of the legislation, as well as the severe personal, adverse impacts. While, for purposes of your review, it is not necessary to provide a detailed restatement of these impacts, i feel we must provide at least a brief summarization:**

- Significant increase in the cost of housing and related expenditures.**
- Significant increase in the cost of transportation and related expenditures.**
- Significant decrease in available income for items like food and clothing.**
- If we had desired to live in the New England area we would have found jobs there. We chose to live in Arizona because of the close proximity of our relatives, the weather, etc.**
- Having chronic/severe bronchial asthma, the New England atmosphere is not conducive to things like breathing.**

RESPONSE: Your comment are noted. Thank you very much for expressing your views.

- o In terms of the actual transfer of functions, we have addressed our congressmen on the following points:**
 - Spending approximately \$500 million to "back fill" an installation originally slated for closure.**

- Having a probable increased annual expenditure for operations (inclusive of the "streamlining of the U.S. Army Information Systems Command), anywhere from very minimal up to \$31 million per year.
- Historically speaking the U.S. government does not come very close to budget estimates for large scale projects. It is probably safer to say that the actual costs for this project will exceed \$1.0 billion, and will cost many millions each fiscal year thereafter.
- The apparent "logic" for the USAISC realignment to Fort Devens was to back fill the military facilities. The intention of the act was to cut Department of Defense costs, not to give a three star billet to a senator seeking self gratification.
- If we are trying to close military facilities, which is an admirable goal, why incur these huge expenditures for both new and rehabilitated facilities? Why have "good money" chasing after "bad money," when this country continues to increase its debt by incurring annual deficits? Why move an organization when there can be no apparent improved operational effectiveness or efficiency?
- Private industry has already discovered that the cost of streamlining and/or closing facilities is significantly cheaper in the long run, than it is to relocate organizations. A case in point is the recent closure of an IBM facility based in Tucson, AZ; another earlier case is the streamlining and subsequent closure of a Gates-LearJet facility in Tucson, AZ. It seems to me that if the government is desirous of utilizing contractor resources, i.e. OBM Circular A-76 (Contracting Out) then we need to follow the corporate lead in the handling of all fiduciary responsibilities.

RESPONSE: Thank you very much for your comments; no response is required.

- o Let me now address the actual Draft Environmental Impact Statement. Unfortunately, neither my wife nor I were able to attend the recent town meeting, due to a previous engagement. However, based upon the minimal amount that appeared in the local newspaper, we do not feel that the recent town meeting proved to be representative of the actual sentiments toward the base realignments. There are probably a handful of individuals who stand to make a fortune should the transfer take place, however it will be at the expense of many hundreds of families and other individuals.
- Due to the restructuring of Sierra Vista, there will be a need for services which appeal to an audience of approximately 2,000 18-22 single individuals (with only temporary assignments at Fort Huachuca). Such services include bars, used car lots, bordellos, fast food restaurants, etc.
- These temporarily assigned personnel have no need to obtain permanent residences in the area, thus the significant number of houses placed upon the

local market will remain vacant and unsold, which will add to the already strained housing market. Regardless of what appears to be a stable market, we can drive around the city and see hundreds of houses for sale, houses in foreclosure, etc. We can see houses staying on the market 12 to 24 months, and more. We can see that the starting asking prices are significantly lower than what they were or would have been prior to the move announcement. In terms of our residence, we did not intend to make money from the house. We intended to have a residence that we can live in and enjoy. We did not intend to lose a significant amount of money, especially due to the irresponsible acts of 435 congressmen. There are hundreds of other people that are in the exact same boat.

- The city may be trying to "sell" itself as a potential retirement community and/or an ideal location for industry. However, there is only minimal evidence that they are accomplishing anything for retirees; and any evidence that the city can be considered an industrial location has been negative (primarily due to the lack of transportation systems).
- Adding 10,000 to 20,000 individuals (affected employees, families, and related support personnel/families) into an already congested area seems ludicrous. While the impact may be small in terms of percentages, there will be an adverse environmental impact. It is not possible to add these numbers of people into an area and honestly believe that nothing much will happen. There will be increased pollution, both home and road construction, garbage and garbage dumps, traffic to and from Boston (we still will be TDY to Washington DC, Europe, and the Far East, etc.), increased need for fuels, etc.
- o While these comments present only short glimpses of our position on the base realignment, we hope that we have conveyed our opinion that this entire transfer is a significant waste of resources and will have a significant adverse impact on the local economy, as well as us personally. We see Sierra Vista becoming a stereotypical military town and all the negative connotations associated with a military town.
- o If there were significant economic and responsible reasons for continuing with the transfer, we would probably not object. Neither we, nor the congressmen who have expressed their view points on the matter, have been above to come up with anything positive about the move. So then, why do it?
- o Because of this particular base realignment, and its affect on the work force, we have seen significant decreases in both productivity and dedication to the job. This is not because these people lack the ability to be productive and dedicated but because of the lack of faith in our so called "leadership." We hope that our comments will provide support toward the cancellation of this base realignment effort.

RESPONSE: Thank you for your comment; no response is required.

COMMENTS FROM THOMAS M. REARDON, LETTER OF APRIL 5, 1990

- o I attended the public hearing hosted by your organization on March 21 and noted that Colonel Thomas stressed that the realignment of the U.S. Army Information Systems Command is a component of the Base Realignment and Closure Act which has become law. As a result, Colonel Thomas emphasized that although the realignment of the Information Systems Command may be seen as ill advised, "...the Army must obey the law."

I cannot fault Colonel Thomas' analogy since he is a soldier and must obey his orders. However, over the past several months I have heard "...it's the law" to be a common rationale by the Army leadership for proceeding head long into moving the Information Systems Command in spite of factual data from a variety of creditable sources that such a move will result in a significant financial loss to the Army.

RESPONSE: This statement is correct, the Army must obey the law.

- o With this in mind, I read with interest the enclosed article which appeared in the April 2, 1990 edition of Defense News which noted "Congress is delivering its most forceful ultimatum yet in a raging controversy over U.S. Army reluctance to comply with a law (emphasis added) requiring the service to conduct side-by-side tests for three interim tank-killing missiles."

As you can see in the article, the Army has opted to defy a law over a perception that such lawfully mandated testing would "...cost up to \$200 million...which the Army cannot afford in a shrinking budget."

RESPONSE: This comment is not germane to the EIS at hand, no response is required.

- o I am certainly in no position to comment on the sensibility of the Army's reluctance to comply with the law regarding a complex issue such as missile testing, but I can observe that the Army appears to be selective in which laws it chooses to obey. I can only deduce that the Secretary of the Army's decision to defy Congress regarding an issue involving a \$200 million bill for missile testing shows that the Army is not, to its credit, inclined to systemically march "off a cliff" in response to law on certain issues. I am puzzled that the realignment of the Information Systems Command, which has a much greater negative impact on the Army's shrinking budget, is not also a choice of Secretary Stone for a stand in the interest of sensibility and fiscal responsibility.

RESPONSE: Your comments are noted, no response is required.

- o I would recommend that the DEIS be amended to reflect that the Army is choosing to comply with the Base Realignment and Closure Act in spite of known flaws and financial negatives. Further recommend that the DEIS reflect the legal options

available to the Army to seek amendment of the portion of the Base Realignment and Closure Act that now "requires" the Army to move the Information Systems Command.

RESPONSE: The Army is required to abide by Public Law 100-526. There are no options to this compliance.

COMMENTS FROM HARRY E. WILSON, LETTER OF APRIL 14, 1990

- o Paragraph 4.9.1.4, Solid Waste Recycling should be required [versus] being encouraged.

RESPONSE: Many items are recycled. A commercial vendor is building a solid waste recycling facility at the existing landfill site to handle additional materials.

- o Paragraph 4.9.1.5 states that the base hospital is currently operating a full design capacity. Where are the increased additional requirements with more personnel transferred to Fort Huachuca going to be taken care of at?

RESPONSE: This situation is being remedied through implementation of other actions not related to the realignment.

- o The possibility of asbestos at Fort Devens and Fort Monmouth needs more discussion under the Air Quality sections.

RESPONSE: This issue has been discussed in detail in Sections 3.8 and 4.8 of the Final EIS.

COMMENT FROM RITA JACKSON, TELEPHONE CONVERSATION, APRIL 12, 1990

- o Ms. Jackson expressed her concern that the EIS consider the possible impacts to the Sanborn long-nosed bat and other raptors and their habitat due to the increased training activities of affected ranges.

RESPONSE: Section 4.2.1.3 of the EIS describes this potential impact and provides measures to mitigate for any potential significant impact.

5.2.2 In-Person Comments from Public Hearings at Forts Huachuca and Devens

COMMENT FROM JODY KLEIN, DIRECTOR, COCHISE COUNTY PLANNING COMMISSION

- o I have just a few concerns with the EIS. And one of those is that I'm not really sure that this is a meaningful opportunity to really be involved in the process since the

decision has already been made, and it's like doing something after the fact to do that. Normally, an EIS presents various alternatives to action and courses of action. And the constraints are that it's already a done deal, and that this is justifying what has already been decided upon.

RESPONSE: Your statement is correct in that the only alternatives that are considered in the EIS are implementation alternatives. Alternative realignments are not a portion of the EIS in accordance with P.L. 100-526. The impacts of the realignment are considered in detail in the EIS, no attempt is made to justify the project because this law waves the consideration of alternatives.

- o One other concern is that an EIS typically talks about mitigation measures. You mentioned that City and County folks were actively engaged in process to try to do that. I think we all recognize the need to diversify the economy here, and to be actively engaged in economic development efforts, and both City and County are strongly behind those.

But I think it would be naive to just pass things off and say that those things are going to happen right away, and that the short-term impacts, and even on a longer range basis, these are significant impacts. And, I definitely agree that there are going to be some significant socioeconomic impacts.

And I don't think the EIS has really dealt with mitigation measures effectively, and I'm not sure that it can deal with it effectively, to be honest with you. So those are just some basic comments to start off.

RESPONSE: We have added additional mitigation measures to Sections 4.2 and 4.3. You are correct in that the economic mitigation measures do not reduce the significant economic impacts to nonsignificant levels.

COMMENTS FROM MS. BARBARA GARCIA

- o In [the EIS] you speak of the average cost of housing at Fort Huachuca and the mean cost of housing at Fort Devens. The mean cost at Fort Devens is \$129,000. You have 1,107,214 housing things there, and at Fort Huachuca you say you have 70,000. I'd like to know how big an area you figured to get those figures with. In other words, Fort Huachuca from here to where, and Fort Devens from here to New Hampshire, maybe? That's an awful lot of houses in a short period, unless you're counting downtown Boston.

RESPONSE: The housing analysis was conducted using the best available information. Housing data for Fort Huachuca included the County of Cochise only. Housing analysis for Fort Devens included the four

county area of Middlesex, Worcester, and Suffolk in Massachusetts and Hillsborough County in New Hampshire.

- o The Fort Huachuca [real estate] figures showed that 50 percent of the houses were this price range, 20 percent were this price range. We did not get that from Fort Devens at all. That's one question. So I do have some questions on that.

RESPONSE: The specific distribution of sales prices for the Devens areas was not available to the preparers of the EIS.

- o Did you in the cost and the impact, figure the cost of building buildings here at Fort Huachuca so they could withstand earthquakes? Although we haven't had one in a few years, we are in a seven Richter scale for earthquakes, and we've had some pretty bad ones.

RESPONSE: The cost for proper seismic design is included in estimated costs for new construction.

- o In regard to the deployment of troops in the field; years ago the settlers practically ruined this whole valley by overgrazing. Now you can overrange, I guess, too, with the troops. Have you really studied into what you're going to do on that? Plus, the runoff with all the construction that you're going to be having will flood Sierra Vista.

RESPONSE: We believe that the additional amount of erosion and runoff from construction activities and increased range use will not result in any significant increased flooding impacts.

- o I've been here 25 years, and my husband's family came here in 1887, and went to work at Fort Huachuca. So I guess you'd call him a native. The minute they start construction on Fort Huachuca, we'll have a deluge of water going down Fry Boulevard.

RESPONSE: We do not anticipate any potential increased flooding impacts associated with construction. Construction specifications will stipulate that appropriate measures be taken to minimize such impacts.

- o Did you also take into consideration, with the different type of troops that you've got coming in here, we're now going to have Tucson's Speedway? And for any of you that have been here for a long time, you know what Tucson's Speedway's got. It's got the strip joints, it's got the bars, and that's just about all that's on the area now.

RESPONSE: There may be some changes in the area's character and the types of businesses associated with the area. We do not expect a full scale change in the types of businesses since this can be regulated by community zoning laws.

- o With young troops, and taking the higher graded people out who are buying permanent-type structures instead of cars and the fast food joints, tell me that's not going to affect this community. Thank you.

RESPONSE: Please see the response to the above question. There is a potential that some community changes will occur.

COMMENTS FROM CLAUDE SANDERS, ASSISTANT SUPERINTENDENT SIERRA VISTA PUBLIC SCHOOLS

- o Our concern, of course, is looking through the impact study and the effects it will have on education and the use of facilities, and things of this nature in education in our excellent school district. We feel we have probably one of the finest school districts anywhere in the United States, based on our achievement scores and things of this nature, and wonder what this is going to do to us.

RESPONSE: In the revised socioeconomic impact section 4.3.1 in the Final EIS, we have remodeled the potential impact to the school districts as a result of the realignment. We now anticipate that there will be a significant impact to the Sierra Vista School system due to the decline in student enrollment and the loss of federal revenues.

- o Also, looking at the study, it does not affect, nor does it talk about the idea that the schools that are on Fort Huachuca are separate and independent schools. They are run by Fort Huachuca and the military.

RESPONSE: We have discussed that the elementary schools on-post are separate although all area high school students attend Sierra Vista Schools. We are not projecting significant impacts to the on-post schools since the available family housing on-post would remain constant.

- o And we educate the high school students. There is no high school on Fort Huachuca. So it is a major impact if we're talking about younger children coming in at a loss of older students.

RESPONSE: There will be a loss of older students. Most of this loss will stem from students living off-post.

- o We have just passed a bond issue in this community for \$25 million to build a new high school. That definitely, in this change in age of students, will affect us tremendously.

RESPONSE: We agree that this bond issue coupled with a decrease in enrollment will affect the district adversely.

- o We also wonder, when it talks about the large increase of students, how that would be taken care of on Fort Huachuca due to the fact that students who attend the Fort Huachuca schools live on the post. Students who do not, attend Sierra Vista schools. We are not a tied-together district in any way, except for high school students. I'm not sure where they could accommodate those if they've taken into consideration the tremendous need for new facilities, that would do it on Fort Huachuca.

RESPONSE: Section 4.3 has been revised based on better available information on troop type and families accompanying students. Based on this reanalysis, there will be a substantial decline in total enrollment and a relatively constant enrollment at on-post schools.

- o I know we're not to debate the thing, but as representing the school district, I just have to say that I think this is a very poor idea.

RESPONSE: Thank you for your comment, no response is required.

COMMENTS FROM DANA HARRIMAN

- o I'd like to talk a little bit about how this first started, and where we're at today with the EIS. I think what Jody was talking about, we're kind of far down the road with this EIS now, and it should have been considered back when this was first put together. It first started out with Base Realignment and Closure. That came out in January of last year. Immediately after that hit the newspapers, the lending institutions started cutting off money to this area, which created a very definite impact in this area. The construction in the private sector virtually dried up, because they didn't know what was going on here. Government contracts dried up, even more so in the DEH area. Contracts were given out sole source to their contractor they already had on board, which limited the construction contractors to nothing in this area. And they're all starting to bid or trying to bid areas outside of this region, because there is nothing left in this region.

RESPONSE: Thank you for this information, it has been made a portion of the public record.

- o The people affected, it's really throughout the community. Not only are the contractors affected, the insurance companies are affected, the bonding is affected. We're no longer having construction going on, so therefore bonds don't occur. Contractors are not taking these out.

RESPONSE: Thank you for this information.

- o The banks, all the people that the contractors deal with, that money is no longer here in the community. The wholesale houses and the other areas that are also affected, that sold the materials to the contractors. The construction that was addressed, the areas that were talked about, it was talked about \$118 million that are going to be spent through 1995.

RESPONSE: It is projected that \$129.2 million will be spent on construction. Section 4.3.1 has been revised to estimate the extent of beneficial impact associated with the four year construction activity.

- o Typically what we have seen here in the Sierra Vista area, those contracts have been so large they're impossible to bond by these contractors here. So the work will be done by contractors outside of the city of Sierra Vista, or outside of the community. When that happens, the money, the profit, the overhead, that all leaves this area. It is not left in this community.

RESPONSE: There will be some contracts that will be of a size that local contractors can bid. There is also considerable opportunity for local contractors to subcontract. Additionally, some of the large construction contracts will require that a successful bidder have a subcontracting plan that meets with the approval of the Corps of Engineers, Los Angeles District. This plan will require the successful bidder to show what subcontracts will be let to small and disadvantaged small businesses. To assure maximum participation of local contractors, the Los Angeles District will conduct a conference for contractors, suppliers, and others in construction-related enterprises to explain what the Corps can and cannot do to maximize the participation of local contractors.

- o There is a statement in the Environmental Impact Statement, in the draft, that talks specifically about the construction that will be occurring, not considering the effects of that, because it will probably have a positive impact on this community. There is an area in the impact that addresses that. I'd like to see that taken out, or some further discussion made on that, because that definitely is going to impact the area.

RESPONSE: Additional analysis has been provided in Section 4.3.1.

- o I wasn't able to go through this as much as I would have liked to have. It talks in here — it is very difficult to mitigate significant in the economic impacts. I don't think it's difficult at all if there is a commitment by the Department of Defense. It is written into the Environmental Impact Statement to do something about that.

RESPONSE: There are some programs that the Department of Defense can initiate, several of which we have mentioned in the EIS (OEA's technical and fiscal assistance for community redevelopment planning, Homeowner's Assistance Program, the DARSE program). However it is likely that

the impacts will remain significant without other major changes in the community.

- o There are some milestones laid out as to what would happen. Some of the things that could happen have happened in the past in other areas, have to deal with initiatives being given to contractors in this area, some type of positive percentage of bonus on the contract, that they would have a 10 percent advantage or a 5 percent advantage, something to be given to the contractors in the area that is going to be most impacted. And it should be done through this period through 1995.

RESPONSE: Section 4.3.1 has provided some measures to allow contractors within the community to bid on projects. Contracting regulations do not allow for a percentage requirement for local contractors.

- o In short, one of the things, without going into a lot of this, I think there has been a lot of disinformation out there, a misunderstanding about the contracts and the construction. The contractors are very upset about it. We would like you all, the Corps of Engineers, to take a little bit closer look at it as to how it is going to affect this community, the monies, and how they leave this community.

RESPONSE: We have considered your comments in the revised Section 4.3.1. Thank you very much for this information.

- o If we have a \$118 million contract, contracts, worth of contract going on through 1995, that represents approximately \$20 million of profit and overhead in those contracts. And if those are out-of-town contracts, that's \$20 million that are going to be leaving this area that could be reinvested in this area and used more wisely in this area to help build this community.

RESPONSE: Please see the above responses, previous page and this page.

- o We do not see that the impacts in this area were going to be as severe as what was originally announced. Unfortunately, when it first hit the papers back in January, everybody thought Sierra Vista was going to dry up and go away. Some of the lending institutions in Tucson, because of misinformation that hit the newspapers, said, "Oh, gee, we thought Fort Huachuca was closing." Closures got out, not realignment got out, a lot of misinformation.

We need to get that relooked at. I think there has to be some better publicity put out so people better understand what's happening, so there is less fear in this community. And I thank you very much.

RESPONSE: Thank you very much for your comments. As noted in the hearing, Fort Huachuca is not closing.

COMMENTS FROM MICHAEL FLANNERY

- o I'm speaking as a resident of the area. And I think there's a little-publicized fact of great importance that I would hope might at least be mentioned or highlighted in the EIS. It's no secret this is a one-engine economy here in Sierra vista, and the opportunity to correct that gratuitously was perceived by General Paige a long time ago. And Senator Goldwater introduced a bill, and it became public law, that 200 acres would be made available for sale, which your office is handling, at the airfield, adjacent to Libby Army Airfield, for the purposes of an entrepreneur buying that at fair market value, to develop some kind of industrial base, and air industrial park or some kind of an economic engine for the economy.

But yet, that's not mentioned in the environmental statement, and neither is it mentioned by any of the planners or anyone that I can hear saying anything about it. So for publicity's sake, if it was mentioned, it's about to go on the market. I think Mr. Eichert is here from the real estate office. He probably could update the status on that.

RESPONSE: This fact was prominently mentioned and described in section 4.3.1 of the Draft EIS.

- o If somebody would buy that and put some kind of a project there to employ other people in Sierra Vista, I think that would mitigate a lot of the economic impact. Now, perhaps enabling legislation at the federal level -- of course, we are by the border to have a joint venture, say a Maquiladora project with Mexico would be in order. But yet nobody seems to know about this 200 acres that's about ready to go on the market, which I think is a very gratuitous event.

RESPONSE: Thank you for this information, it was included in Section 4.3.1 of the Draft EIS.

COMMENTS FROM JOSEPH PATZ

- o And the first comment that I have to make is under Section 3.2, Biological Environment. And it's areas 3.2.1.1, Vegetation, and 3.2.1.2. No mention is made of the effect of increased troop and range activity will have on the vegetation and wildlife in those areas.

RESPONSE: You are correct since the quoted sections refer to the affected environment and not the impact analysis. Section 4.2.1 of the Draft EIS provides the requested analysis.

- o Section 3.3, Socioeconomic Environment. 3.3.1.3. The cost estimate uses the average housing price of housing owned by USAISC personnel in the City of Sierra Vista. This does not include the employees which live in the city of Tucson.

RESPONSE: The region studied was Cochise County. Tucson was not included since the vast majority of impacts to housing would be within the County.

- o 3.3.2.3 uses the medium price of housing as a comparative figure for Fort Devens. Apples and oranges. The geographic bounds of the region study is also not defined.

RESPONSE: The medium price of housing in the Fort Devens area is the best available information at the time of EIS preparation. The five county economic study area is defined in Section 3.3.2.2, first line.

- o Under item 3.4, Cultural Resources, the EIS makes no mention of the impact which the increased ICS troop activity will have on these resources.

RESPONSE: Section 4.4 in the Draft EIS does provide the analysis of this potential impact.

- o Under item 3.5, Noise, item 3.5.2. At Fort Devens, will weapons training activities on ranges cease other than for qualification of Headquarters ISC personnel and reserve personnel? Will this change this unacceptable noise level contours to within the limits of the Post?

RESPONSE: Weapons training activities on the ranges will continue with no reduction in noise levels, as National Guard and Army Reserve troops will continue to fire mortars and the Moore Army Airfield will continue to be used.

- o Item 3.9, Utilities and Public Services. At Fort Huachuca, items 3.9.1.5 and 4.9.1.5, Public Services and Safety. No consideration is given to the additional fire danger created by the increasing number and size of maneuvers conducted on the ranges. No mention is made of the capability of the Raymond W. Bliss Army Community Hospital to handle the approximately 1,500 military personnel increase which ICS brings with it.

RESPONSE: The increased potential for range fires has been added to Section 4.9.1.5. Thank you for bringing this omission to our attention. As described in Section 4.9.1.5, there will be an increased requirement for medical care on-post. A new dental clinic is proposed to support the realignment activity.

- o At Fort Devens, item 3.9.2.1, Water Supply. No mention is made of the ability of the groundwater wells to support the requirements of additional personnel added to the Post population by the ISC move. What is the purity of the groundwater based on the soil contamination indicated in paragraph 3.8.2, the discharge of wastewater into the groundwater supply in item 3.9.2.2, and the possibly leachate infiltration from solid waste disposal, in item 3.9.2.4?

RESPONSE: The addition of approximately 200 personnel on-post during the day will not significantly increase the demand for potable water from the installation wells. The four wells on post can adequately supply future demand for potable water. The installation well monitoring program did find organic and metal contamination immediately adjacent to the landfill. However, there was no indication of groundwater contamination by the landfill or other contaminated sites on-post. Treated effluent from the wastewater treatment facility at Fort Devens is discharged to treatment beds near Moore Army Airfield; no discharge to the groundwater occurs. The Massachusetts Correctional Institute in Shirley, MA discharged wastewater into groundwater. No increase in the amount of wastewater treated by this plant will occur from realignment.

Fort Devens operates a waste transfer station where the domestic solid waste collected on-post is stored until transported for off-post disposal. Solid waste storage and transfer activity will not change as a result of realignment.

- o **Item 3.9.2.4, Solid Waste Disposal.** There is no alternative disposal sites selected to replace the current landfill after its closure in December of 1991. That's Fort Devens. Since landfills in surrounding areas have been kept, there will be a problem with waste disposal. The increased transportation requirements of solid waste after December 1991, will create the additional problems of hazardous waste handling, and raise the possibility of increased groundwater and resource contamination.

RESPONSE: The waste transfer station operated by Fort Devens will continue to operate after the closure of the installation's landfill (December, 1991). The transportation of the solid waste will not increase the possibility of groundwater and resource contamination.

- o **Item 4.1, Physical Environment at Fort Huachuca. Item 4.1.1.3, Geology.** Are the structures to be built at Fort Huachuca being constructed considering the shifting nature of the sedimentary pediment that would take place during a magnitude 7.0 earthquake?

RESPONSE: Yes. Proper seismic design criteria and standards will be followed for new construction.

- o **At Fort Devens, Item 4.1.2.2, Hydrology and Water Quality.** This does not take into consideration the impact of the increased personnel living off-post, and increasing the demand on the municipal water supplies — systems, excuse me, surrounding Fort Devens.

RESPONSE: We did consider this impact. Since little regional development would occur, we do not believe there will be a significant impact.

- o **Item 4.2, Biological Environment. Items 4.2.1.1 Vegetation, 4.2.1.2, Wildlife.** No mention is made to the effect that increased range operations and personnel will have upon the San Pedro National Riparian Conservation area. This area, which forms the eastern border of the East Range, was established by Congress to reserve one of the few existing examples of a riparian area remaining in southern Arizona.

RESPONSE: Because of the avoidance of activities in riparian areas, we do not project an impact to this area due to realignment activities.

Disturbance to the freshwater marshes or riparian woodlands within the perimeters of the Post by increased range use, can have an exponential effect upon the resources and wildlife habitats which currently exist on the San Pedro River.

RESPONSE: We agree, that is why training activities will not occur in riparian or marsh areas.

- o **Item 4.2.2 at Fort Devens.** Under that, item 4.2.2.1, Vegetation, states that the realignment is not expected to impact the aquatic ecosystems surrounding Fort Devens, et cetera. What about the discharge of wastewater into the groundwater referred to in paragraph 3.9.2.2?

RESPONSE: The discharge referred to in paragraph 3.9.2.2 is from regional, not installation facilities. Realignment will not cause a significant increase in discharge from regional facilities; wastewater will not be discharged to the groundwater.

- o **Item 4.3, Socioeconomic Environment. Subparagraph 4.3.1.2, Population and Employment.** What effect will the overall regional population increase of 1,348 have upon the surface, recreational and conservation areas in the Cochise County area? What effect will the lower average income of this increased population have upon the property and sales tax bases and other revenue-generating levies?

RESPONSE: Since the population increase is small, we do not believe there will be a significant impact. There will be an adverse impact on public finance in Cochise County as stated in Section 4.3.1 of the EIS.

- o **Because of the transient nature of the incoming students who tend to rent apartments rather than buying a home, and will be buying fewer durable goods locally, will the residents of Sierra Vista be faced with higher tax rates to maintain the municipal services existing now?**

RESPONSE: There is that potential, since a population decrease could occur. The city would determine how best to rectify any funding shortfalls.

- o **Item 4.3.1.4, Real Estate and Property Values.** With the net decrease of 900 military and civilian personnel, permanent party personnel, along with the decrease in the average salary, is it a realistic, valid assumption that there will be an increase of 167 units of owner-occupied dwellings, and a decrease of 444 units of renter-occupied dwellings?

RESPONSE: No it is not; we have revised Section 4.3.1.4 based on better model input to show there will be a substantial decrease in owner occupied units.

- o **The draft EIS further states that the overall net effect of the realignment action will be substantial in demand for owner-occupied housing. Is this a valid statement?**

RESPONSE: No it is not; please see comment above.

- o **Fort Devens, item 4.3.2.2, Population and Employment.** The EIS states the employment in the our-county area around Fort Devens is expected to increase by 3,605 people, and regional sales by 412.8 million. Both figures are not considered to be significant for Massachusetts. How significant are these figures for economically depressed Cochise County?

RESPONSE: As described in Section 4.3.1.2, there will be a significant adverse impact in Cochise County.

- o **Item 4.3.2.3, Changes to Economic Trends.** The charts detail the tax revenue gains to Massachusetts from the realignment, which the report considers insignificant. Why has not that same form been used to portray the revenue losses to the State of Arizona and Cochise County?

RESPONSE: We have revised that section. The exact amount is not known.

- o **Item 4.3.2.4, Real Estate Property Values.** This paragraph states that the realignment will result in an increased demand for only six owner-occupied units in Massachusetts. Is this figure valid in light of the fact that 2131 civilian positions will be gained by Fort Devens?

RESPONSE: No this is not, we have revised those estimates in Section 4.3.2.4.

- o **Item 4.3.2.5, Schools.** In light of personnel gains the expectation that school enrollment in the four-county area around Fort Devens will increase by thirteen pupils, and the Ayer (ph.) school system is only expected to increase by -- excuse me. That was six pupils. And the Ayer school system is only expected to increase by thirteen pupils.

RESPONSE: We have revised that section in the Final EIS. There will be a substantial increase in school children in the area.

- o Item 4.4, Cultural Resource. Item 4.4.1 at Fort Huachuca. Will the mitigation of the impacted cultural resources follow the same path that has been historically followed at Fort Huachuca? An example being the Apache scout boarders which were historical structures, destroyed in 1983 over a weekend, and the destruction was announced on the following Monday.

RESPONSE: This is not expected to occur since all requirements of Section 106 of the National Historic Preservation Act will be complied with.

- o Item 4.6, Traffic. Under Fort Devens, item 4.6.2, the traffic volume increases are stated as expected to be 11 to 14 percent on Pose, yet the report states this is not considered significant. 11 to 14 percent to me is a pretty significant figure.

RESPONSE: This is not significant since the roadway is below capacity.

- o Item 4.7, Aesthetics and Recreation. 4.7.1 at Fort Huachuca. There is no mention of the effects that the increased transient military population will have upon the San Pedro National Riparian Conservation Area.

RESPONSE: We do not believe that there will be a significant impact to this area.

- o That's the end of my statement. I'd just like to say that I think the whole idea of the move sucks, and I would also like to thank Representative Kolbe and Senator McCain and Senator DeConcini, and I sure will remember them on election day. Thank you.

RESPONSE: No response is required.

COMMENTS FROM PAUL GIGNAC

- o I'm employed here on-post. I'm slated to move — our organization is slated to move first in this fiasco. But I notice the impact statement did not address the potential of, we'll say, family members that either own businesses here in town that will not be able to transfer with their spouses, whether it's male or female.
- o And also, it did not address employees that work for organizations that are not transferring off of Fort Huachuca, which means that the folks do split, working with two families, maintaining two households, in two different geographic areas. I figure that should be in the impact statement just for the simple statement that it is an impact on somebody.

RESPONSE: We understand and sympathize with the family problems that the realignment will create. This EIS has made every effort to address all environmental and socioeconomic impacts concerning the realignment.

COMMENTS FROM LARRY SMITH

- o I'm the owner of a small company here in Sierra Vista. And I noticed I have not had an opportunity to study the draft completely. And I also listened to the statements that have been made. But one of the things that concerns me is the impact of the Information systems Command and its major subcommand, the engineering division of the command, has traditionally over the last 15 years had a major contractor that provides at least two to three hundred man-years of work to provide them professional and technical service. And the contract has, over that period of time, required the contractor to be within a 15-mile radius of Fort Huachuca. The impact of that contractor, and today the man-years are somewhat similar. The impact -- the impact of that, is this being considered in the Environmental Impact Statement? It's just a comment.

RESPONSE: Thank you very much for your comment; no response is required.

COMMENTS FROM BARBARA GARCIA

- o I can be heard, I know, because I've spoken to larger groups. In this study there was a section in here on transportation at Fort Huachuca. And I'm sorry I had to laugh at that one. Because the alternative, and the thing to help, was that there's no transportation here and you're to use public transportation. An my first question was, what public transportation? We don't have any public transportation anywhere in the Sierra Vista area except for a small cab company. We don't even have a bus that comes to town any more, and they took the railroad tracks out a couple of years ago. So I'd like to know what public transportation you were talking about.

RESPONSE: The public transportation mentioned in the EIS refers to the shuttle and commuter buses that are currently in use at the Post. It does not refer to public transportation off-post.

COMMENTS FROM PENN LARDNER, AYER HIGH SCHOOL (RE: FORT DEVENS)

- o I'd like to make reference to Table 4.3-2 and at the same time I'd like to make reference to 4.3.2.5 listed schools.

On the Table 4.3-2 it talks about information systems people coming and going. We obviously are losing a number of people on the post, and being replaced for civilians. Obviously that's an enormous amount of civilians coming in for jobs opening for civilians, none of which are demanded to send their kids to Ayer High School. 2,000

people or 2,100 can choose what places they want their kids to be educated. I think the impact is far greater than the numbers might indicate.

RESPONSE: Basically, after the realignment at Fort Devens, military students will be replaced by civilians. Military students currently have very few school age children. Substantial numbers of incoming civilians, many of whom have school age children, can be expected to reside in Ayer. Actual numbers of transfers cannot be determined at this time. Ayer school enrollment may actually increase after the realignment.

- o I think it also is a possibility that education, an impact on education locally is something the military probably doesn't have a good handle on, because obviously it's not their bailiwick. But I'm just saying that that's an enormous group, and to try to *hopefully expect*, as you mentioned in the other area there, civilian people will send their kids to Ayer High School I think is pie in the sky.

RESPONSE: See preceding response.

- o Two things on the page 89. Approximately 70 percent of the Ayer school system enrollment is accounted for by dependents of Devens military. Quite obviously that's going to go down dramatically. If you only have 900 people living on-post and 2,100 people that you are placing that now have an opportunity to go anywhere they want, we're going to be devastated, I think, by that kind of situation. Again neither of us knows what the answer is going to be, but I just feel it probably will be to our detriment.

RESPONSE: See previous response.

- o 176 children doesn't sound like a lot, but it is. It's a tremendous impact, especially since we're going through a tremendous problem right now. We lost 14 teachers last year. We're now in the process of losing four more and if we don't have an override, we'll lose approximately 23. So you're now in the range of about 30 or 40 teachers could be possibly gone in this last 2-year period of time. With the loss of kids, that is obviously a big problem.

RESPONSE: The loss of 176 children assumes vacated family housing units on-post (i.e. an on-post surplus of housing) which is not anticipated to occur.

- o We just recently have been able to have the town of Shirley, which sends kids to our school, fortunately not have to go to regionalized with Lunenburg, and therefore, those kids are still available here. But there again still numbers are going down, and the quality of Ayer High School will be affected.

RESPONSE: The quality of education should not be affected by the realignment as numbers of school children are not anticipated to change.

- o Now I'm assuming that the military has made a choice to go with Ayer because they feel the school system is a good school system, and obviously with all this stuff that's going on, you know, Devens may want to rethink that because they may not have a good school here. And of course all the schools are having the same problem.

RESPONSE: Same as previous response.

- o We're proud of our school, and we don't want to see it go down. And obviously if the numbers are incorrect, then this can be a problem. And I just want to basically bring it to your attention that not all is, you know, hunk-dory like it seems to be presented.

RESPONSE: The socioeconomic impact analysis has been redone for the Final EIS to more accurately reflect existing conditions and probable impacts.

- o The last think I'd like to say, it says Public Law 81-874 entitlement are anticipated to climb by .6 million, 0.6 million dollars, from 4.2 million to 3.6 million. I'm not an expert on 874 but I question those numbers.

RESPONSE: As previously stated, actual student losses are not expected in Ayer public schools. Even if the worst case of predicted losses occurred, it is estimated that aid would decline by 0.6 million. Estimates are based on authorized aid and not actual funding received. Actual aid received is approximately 30% below authorized aid.

- o My last figure we're going in with this budget at this particular school year is \$3 million, and we have been down as low as 2.8 the last couple of years. I gather that the 874 money is done every — it's two years behind based on certain formulae. And I gather that the formula or the amount of money that's coming to our school system has been frozen, and we're not going to get the 3.6 or the 4.2. It's been a real bone of contention that Ayer has not been getting its fair share of 874 money. The government says the Town of Ayer is not paying its fair share. That's because the way it has been presented in the past, that Ayer uses 37 percent of its budget, town budget on education, when in fact it's roughly 70 percent.

This is just recently been changed. We've have people down from Washington talking, and they are going to give us another look for the 3D2B money, which is an additional money factor that comes out of 874. We need all the help we can get. We are being definitely short changed in the PL-874 money for whatever reason. I gather the pie is bigger now in 874 than it used to be when it was first established.

But I would question that 4.2 million to 3.6 million. I don't think that is accurate. And I think those figures may be anywhere from four to five years old. We are, I believe, in the present budget figuring on \$3 million, and 3.6 doesn't sound like a lot but it is a lot, especially since we're losing teachers.

I have talked to Susan on the telephone, and Bill mentioned some figures, and Susan said that maybe the figures were not accurate. I don't know which figures are which, but I would like to know if we could put some more time and effort into this before the final to definitely maybe give the Ayer school system a better standing.

RESPONSE: Same as previous response.

- o The reason I'm here is because we're trying to regionalize with Shirley because we need to keep this school system together so that it does provide fine quality for Devens kids as well as the Ayer and Shirley communities.

RESPONSE: The reduction in school aid is predicated on surplus family housing at Fort Devens after the realignment. Currently, there is an excess demand for family housing on-post that is expected to continue after the realignment. If on-post housing remains full as anticipated, there will be no anticipated decline in school aid at Fort Devens after the realignment.

5.3 FURTHER PUBLIC INVOLVEMENT

There will be another opportunity for public review and comment and agency coordination before Final EIS processing and the Record of Decision. After publication and distribution of the Final EIS, there will be a thirty (30) day review and comment period. Notice will be provided to persons on mailing lists maintained by the Corps of Engineers, Los Angeles District and New England Division, press releases in local media, and/or publication in the Federal Register, as appropriate.

This page intentionally left blank.

SECTION 6.0 - LIST OF PREPARERS

<u>Name</u>	<u>Degree</u>	<u>Study Role</u>
<u>Los Angeles District</u>		
Ron Ganzfried	MLA Landscape Architecture	Project Manager
Jonathan Freedman	MS Geography	Associate Project Manager
Ronald Conner	BA Economics	Economics
Steven Dibble	BA Archaeology	Archaeology
Michael Noah	MS Biology	Supervising Ecologist
Terry Breyman	MS Biology	Supervising Reviewer
Dick Aw	BSCE, MCP City Planning	Community Planner
<u>New England Division</u>		
Susan E. Brown	BS Biology	Project Manager
Marie Bourassa	BA Anthropology	Prehistoric/Historic Resources
Kerrin Dame	BS Environmental Studies	Environmental Resources
Capt. William Gavazzi	BS Civil Engineering; MBA	Project Engineer
Lt. Michael Green	BS Economics	Socioeconomics
Gary Morin	BS Civil Engineering	Socioeconomics
Edmund O'Leary	MA Economics	Socioeconomics
Lawrence Oliver	BS Natural Resources	EIS Project Manager - Natural Resources
<u>Institute for Water Resources</u>		
Dennis Robinson		Project Manager
Morris Clark, Jr.		Associate Project Manager
Kim Bloomquist		Assistant Project Manager
Ian McDevitt		Assistant Project Manager
Edwin J. Rossman		Assistant Project Manager

<u>Name</u>	<u>Degree</u>	<u>Study Role</u>
<u>Chambers Group, Inc. (Consultant to the Los Angeles District)</u>		
John Westermeier	MA Biology; MBA	Project Manager
Pamela Morris	MA Biology	Assistant Project Manager
Kenneth Lord	Ph.D. Anthropology	Cultural Resources
C. Wayne Oakes	BA Anthropology/Geology	Cultural Resources
Linda Brody	BA Planning	Environmental Analysis/ Socioeconomics
DiAnne Valentine	BA Urban Planning	Socioeconomics
Todd Brody	BA Environmental Biology	Noise/Air Quality
Edith Read	Ph.D. Biology	Biological Resources
James Biggs	MS Wildlife Biology	Biological Resources
Robin DeLapp	BA Anthropology	Socioeconomics
Teri Van Huss		Report Production
Pam Finch		Word Processing
Teresa Coleman		Word Processing
Nicole Eastly	BA Fine Arts	Graphics

SECTION 7 - DISTRIBUTION LIST

Following is a partial listing of public agencies, officials, and private persons or organization from whom review and comment is requested. Extensive mailing lists are being maintained by the Corps Los Angeles District and New England Division and will be used to notify interested persons of the availability of Draft and Final EIS documents and to solicit review and comment. Additionally, installation Public Affairs Offices and local media (e.g., newspapers, radio, and television) will be involved in these notices.

Office Legislative Liaison
Base Closure Project Officer
NEPA Project Manager
Office of Economic Adjustment
NEPA Coordinator
U.S. Army HQ TRADOC
U.S. Army HQ Information Systems Command
U.S. Army HQ Intelligence Center School
Environmental Protection Agency
Council on Environmental Quality

Fort Huachuca

Councilman Michael Hicks
Sierra Vista Public Schools
Sierra Vista Chambers of Commerce
Sierra Vista Campus, Cochise College
City of Sierra Vista
Councilwoman Ethel Berger
Councilman Jeff Hass
Hon. William J. English
Mayor Carl Frieders, City of Sierra Vista
Mayor Carol Vaughn, Town of Huachuca City
Huachuca City Town Council
Economic Development Foundation
Cochise Private Industry Council
N.A.A.C.P. Greater Huachuca
The Nature Conservancy
Industrial Development Authority
Senator Jeff Hill
Huachuca Art Association
Arizona State Department of Economic Security
Arizona Water Company

Fort Huachuca (continued)

Arts and Humanities Commission
U.S. Army Garrison
U.S. Army Information Systems Command
Intelligence Center and School
Bureau of Land Management
Bureau of Reclamation
Farmers Home Administration
U.S. Fish and Wildlife Service
State Historic Preservation Officer (AZ)
Arizona State Senate
County of La Paz
The Arizona Nature Conservancy
Arizona Riparian Council
Arizona Wildlife Federation
The Wildlife Society
Audubon Society
U.S. Soil Conservation Service
Hon. Dennis DeConcini, Senator
Arizona Department of Transportation
Arizona Department of Water Resources
Arizona Game and Fish Department
Arizona State Clearinghouse

Fort Devens

Groton Golden Age Club
Ayer Board of Selectmen
Central Massachusetts Chamber of Commerce
Harvard Board of Selectmen
Ayer School Committee
Montachusett Regulatory Planning Commission
Town Council, Ayer, Massachusetts
Hon. Chester G. Atkins, House of Representatives
Hon. Joseph D. Early, House of Representatives
Division of Forests and Parks, Dept. of Environmental Management
Office of Government Relations and Environmental
Review, EPA Region 1
Massachusetts Natural Heritage Program, Division of
Fisheries and Wildlife
Ayer School Regulatory Commission
Nashua River Watershed Association
Massachusetts Department of Environmental Protection
ISC Command Representative

Fort Devens (continued)

U.S. Army Garrison, Fort Monmouth
U.S. Fish and Wildlife Service, Ecological Services
Massachusetts Division of Fisheries and Wildlife
Massachusetts Department of Environmental Management
Ayer Conservation Commission
Harvard Conservation Commission, Town Hall, Harvard, MA
Board of Selectmen, Town Hall, Lancaster, MA
Board of Selectmen, Town Hall, Shirley, MA
State Historic Preservation Officer (MA)

Fort Monmouth

New Jersey Department of Environmental Protection
The Honorable Bill Bradley, U.S. Senate
Regional Director, North Atlantic, USDI National Park Service
Borough of Eatontown Planning Board
Borough of Tinton Falls Planning Board
Borough of Little Silver, Borough Hall
Borough of Oceanport, Borough Offices
Regional Administrator, Region II, Environmental Protection
Agency
Commerce, Energy and Economic Development, Trenton, New Jersey
Deputy State Historic Preservation Officer, Department of
Environmental Heritage
The Honorable Frank R. Lautenberg, U.S. Senate
The Honorable Bernard J. Dwyer, U.S. House of Representatives
The Honorable Christopher H. Smith, U.S. House of
Representatives
The Honorable Frank Pallone, Jr., U.S. House of Representatives
Monmouth/Ocean Development Council
State Historic Preservation Officer (NJ)

This page intentionally left blank.

SECTION 8 - REFERENCES

Altschul, J. H. and B. A. Jones 1989

Settlement Trends in the Middle San Pedro Valley: A Cultural Resources Survey of the Fort Huachuca Military Reservation. Statistical Research, Technical Series No. 19.

Arizona Game and Fish Department 1988

Threatened Native Wildlife in Arizona. Phoenix, Arizona.

DEQE 1987

Massachusetts Department of Air Quality Control, Air Quality Data.

DEQE 1988

Massachusetts Department of Air Quality Control, Air Quality Data.

Economic Development Program 1988

Preemptive Economic Development in Cochise County, Arizona: A Model Economic Diversification Planning Process for an Area with High Concentration of Military Employment. Office of Arid Lands Development in Cochise County, Arizona, University of Arizona, Tucson, Arizona.

Environmental Protection Agency/Remedial Response Program 1989

National Priorities List, Fort Devens, Fort Devens, Massachusetts. Superfund hazardous waste site listed under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), as amended in 1986.

Fitch, V. A., and S. Glover 1989a

Historic and Prehistoric Reconnaissance Survey, Fort Monmouth (Main Post), New Jersey. The Public Archaeology Laboratory, Inc, Pawtucket, Rhode Island. Submitted to Daylor Consulting Group, Boston, Massachusetts and U.S. Army Corps of Engineers, New England Division, Waltham, Massachusetts. Contract No. DACA33-88-D-0006. PAL, Inc. Report No. 315-1.

Fitch, V. A., and S. Glover 1989ab

Historic and Prehistoric Reconnaissance Survey, Fort Devens (Main Post, North Post, South Post), Massachusetts. The Public Archaeology Laboratory, Inc, Pawtucket, Rhode Island. Submitted to Daylor Consulting Group, Boston, Massachusetts and U.S. Army Corps of Engineers, New England Division, Waltham, Massachusetts. Contract No. DACA33-88-D-0006. PAL, Inc. Report No. 315-2.

FORSCOM 1987

Environmental Impact Statement of On-going Mission Activities, Fort Devens, Massachusetts. Prepared June 1979, revised 1980, 1987.

- Harland, Bartholomew and Associates, Inc. 1984
Analysis of Existing Facilities/Environmental Assessment Report, Fort Monmouth, New Jersey. Contract No. DACA51-82-C-0239.
- HUB Testing Laboratories 1987
Fort Devens Asbestos Materials Survey Analysis and Assessment. Contract No. DAKF31-87-C-0025. Waltham, MA.
- Monmouth County Audubon Society 1989
Birds of Monmouth County.
- Monmouth County Parks System 1989
Reptiles and Amphibians of Monmouth County.
- Sierra Vista, City of 1985, Revised 1989
Vista 2000. The City of Sierra Vista General Development Plan.
- U.S. Army Corps of Engineers, Los Angeles District 1990
Unpublished real estate sales data for Sierra Vista, Arizona
- U.S. Army Corps of Engineers, Los Angeles District 1989
Draft EA for Joint Readiness Training Center (JRTC) Rotation 90-1 at Fort Huachuca, Arizona 26 Oct - 5 Nov 1989. Prepared for U.S. Army Corps of Engineers, Little Rock District, Little Rock, Arkansas.
- U.S. Army Environmental Hygiene Agency (USAEHA) 1988
Hazardous Waste Management Survey No. 37-26-0191-88 Fort Huachuca, Arizona, 8-12 Feb 1988.
- USATHAMA 1989
Draft Installation Restoration Program Plan for Fort Devens. Prepared by Mary Ellen Heppner. U.S. Army Toxic and Hazardous Materials Agency, Aberdeen Proving Ground, MD.
- USATHAMA 1988
Update of the Initial Installation Assessment of Fort Monmouth and Subinstallations: Charles Wood Area and Evans Area. Prepared by J.D. Bonds, J.K. Sherwood, and K.A. Becker, Environmental Science and Engineering, Inc., Gainesville, FL. U.S. Army Toxic and hazardous Materials Agency, Aberdeen Proving Ground, MD.
- USATHAMA 1982
Installation Assessment of Headquarters Fort Devens Report No. 326. Prepared by B.N. McMaster, J.D. Bonds, J.H. Wiese, K.L. Hatfield, J.B. Holly, L.C. Carter, E.A. Knauff, and K.A. Civitarese, Environmental Science and Engineering, Inc., Gainesville, FL. U.S. Army Toxic and Hazardous Materials Agency, Aberdeen Proving Ground, MD.

U.S. Fish and Wildlife Service 1987

Endangered and Threatened Species of Arizona and New Mexico, (with 1988 addendum). Office of Endangered Species, Albuquerque, New Mexico.

extra blank page for double sided copying

SECTION 9 - INDEX

academic	15, 16, 30, 43, 83, 170
aesthetics	66, 106, 135, 154, 170
aircraft	21, 43, 46, 65, 68, 74, 170
archaeological	62-64, 103, 104, 127, 170
artillery	21, 43, 45, 64, 170
asbestos	14, 15, 70, 72, 108, 119, 121-123, 126, 142, 167, 170
biological	14, 17, 29, 30, 37, 69, 83, 85-87, 113, 117, 124, 125, 130, 133, 149, 151, 161, 170
climate	21, 24, 27, 136, 170
commercial	39, 47, 48, 53, 64-66, 126, 141, 170
construction	3, 6, 9, 10, 12, 14, 16, 17, 26, 29, 30, 33, 37, 38, 43, 63, 64, 70-72, 78-90, 94-98, 102-106, 108-111, 113, 116, 118, 119, 121, 122, 124, 125, 127, 128, 132, 136, 140, 143, 144, 146, 147, 151, 170
cultural	14, 17, 62, 63, 102, 103, 131, 134, 149, 153, 161, 166, 170
cultural	10, 14, 43, 65, 70, 81, 82, 98, 103, 105, 108, 111, 112, 122, 126
dependents	48, 50, 53, 54, 57, 61, 67, 100, 113, 155, 170
ecological	33, 164, 170
ecological	14, 16, 48, 49, 54, 57, 61, 89, 90, 95, 96, 99, 101, 115, 116, 134, 140, 142, 143, 147-149, 153, 162, 164, 166
electricity	73, 75, 77, 109, 111, 112, 170
employment	14, 48, 54, 58, 94, 95, 98, 99, 101, 133, 134, 152, 153, 166
endangered species	14, 85-87, 89, 118, 120, 125, 168, 170
energy	73, 75, 77, 109, 111-113, 164, 170
expenditures	13, 14, 48, 49, 57, 61, 90, 94, 95, 138, 170
geology	24, 26, 29, 80, 82, 83, 132, 151, 161, 170
groundwater	24, 26, 73-75, 79, 81, 82, 108, 109, 123, 128, 129, 131-133, 150-152, 170
habitat	30, 33, 37, 39, 83-89, 117, 118, 120, 125, 142, 170
habitat	13, 14, 67-69, 71, 72, 79, 107, 108, 119-121, 129, 132, 136, 151, 166, 167
hospital	69, 74, 76, 77, 110, 131, 141, 150, 170
hospitals	76, 77, 113, 170
hydrology	24, 26, 27, 79-82, 132, 151, 170
industrial	27, 48, 53, 54, 63, 67, 68, 96, 139, 148, 162, 170
landfill	26, 70, 72, 74, 75, 77, 110, 111, 120, 122, 126, 129, 132, 141, 150, 151, 170
livestock	46, 170
manufacturing	26, 54, 58, 81, 82, 96, 170
National Register	62, 64, 102, 103, 170
noise	44, 64, 65, 84, 104, 105, 126, 130, 131, 149, 150, 161, 170
noise	10, 66, 82, 88, 89, 104
particulates	21, 26, 27, 81, 82, 170
petroleum	15, 67, 68, 108, 123, 170
phasing	15, 17, 86, 124, 170
police	43, 74-77, 110, 111, 113, 170
pollution	21, 37, 140, 170, 171

pollution . . . 13, 15, 16, 33, 37, 47-49, 54, 58, 61, 73, 74, 77, 81, 86, 95, 96, 98, 99, 101,
 102, 107, 111, 112, 116, 128-131, 133, 135, 150, 152-154
 precipitation 21, 24, 171
 preparers 143, 160, 171
 recreation 27, 46, 47, 53, 58, 66, 106, 107, 135, 154, 171
 recreation 1, 3, 6, 14, 17, 43, 78, 87, 89, 97, 106, 107, 112, 171
 relocation 6, 10, 14-17, 78, 109, 111-113, 119, 122
 rentals 61, 171
 rentals 10, 70, 74, 75, 77, 106, 110, 111, 113, 121, 131, 150, 171
 sales 14, 48, 49, 57, 58, 61, 94-97, 99, 101, 133, 134, 143, 152, 153, 167
 scenic 47, 66, 171
 sewage 26, 73, 76, 79, 102, 109, 171
 sewage 10, 27, 29, 73, 74, 76, 109, 171
 sewer, 16, 17, 39, 48, 54, 58, 89, 90, 113, 115, 116, 131, 133, 143, 144, 149, 152,
 154, 156
 tax 49, 57, 114, 133, 134, 152, 153, 171
 taxes 49, 57, 61, 114, 171
 topography 29, 171
 traffic 64, 65, 75, 77, 81, 82, 103-106, 112, 130, 135, 140, 153, 171
 traffic 10, 128
 utilities 58, 73, 77, 79, 80, 109, 131, 150, 171
 utilities 13, 49, 57, 61, 95, 99
 waste 37, 58, 67-72, 74, 75, 77, 107-112, 119-121, 126, 129, 131, 132, 136, 140, 141,
 150, 151, 166, 167, 171
 wastewater 26, 29, 73-76, 109-112, 128, 129, 131-133, 150, 152, 171
 wilderness 46, 171

APPENDIX A
LISTING OF PLANT AND WILDLIFE SPECIES

TABLE OF CONTENTS

<u>Table</u>		<u>Page</u>
	<u>Installation</u>	
	FORT HUACHUCA	
A1-1	Representative Plant Species that Occur or Potentially Occur at Fort Huachuca	A-1
A1-2	Representative Wildlife Species that Occur or Potentially Occur at Fort Huachuca	A-3
	FORT DEVENS	
A2-1	Important Species of the Glaciated Northeast Northern Hardwoods Region	A-6
A2-2	Wetlands Vegetation at Fort Devens	A-7
A2-3	Mammal Species Known to Exist at Fort Devens	A-8
A2-4	Birds Known to Exist at Fort Devens	A-10
A2-5	Herptiles Known to Exist at Fort Devens	A-13
A2-6	Rare Species Known to Occur at Fort Devens	A-14
	FORT MONMOUTH	
A3-1	A Partial List of Tree and Shrub Species Present in Monmouth County	A-15
A3-2	Mammals Known to Exist in Monmouth County	A-16
A3-3	Birds Known to Exist in Monmouth County	A-18
A3-4	Herptiles Known to Exist in Monmouth County	A-22
A3-5	Fish Species Known to Exist in Monmouth County	A-24
A3-6	Threatened and Endangered Species Known to Occur in Monmouth County	A-25

Table A1-1

REPRESENTATIVE PLANT SPECIES THAT OCCUR OR POTENTIALLY OCCUR AT FORT HUACHUCA

Scientific Name	Common Name	Habitat ^{1/}				
		Grassland	Chaparral	Evergreen Woodland	Riparian Woodland	Marsh
<i>Acer glabrum</i>	maple	-	-	-	X	-
<i>Agave palmeri</i>	Palmer agave	X	X	X	-	-
<i>Agave parryi</i>	Parry agave	X	X	X	-	-
<i>Agave parryi huachucensis</i>	Huachuca Parry agave	-	X	X	-	-
<i>Andropogon spp.</i>	bluestem	X	-	-	-	-
<i>Apodanthera undulata</i>	melonloco	X	-	-	-	-
<i>Arbutus arizonica</i>	madrone	-	X	X	-	-
<i>Arctostaphylos pungens</i>	manzanita	-	X	X	-	-
<i>Argemone platyceras</i>	prickly poppy	-	-	-	-	-
<i>Aristida spp.</i>	three-awn	X	X	-	-	-
<i>Baccharis sarothroides</i>	broom baccharis	X	-	-	-	-
<i>Bouteloua eriopoda</i>	black grama grass	X	X	X	-	-
<i>Carex spp.</i>	sedge	-	-	-	-	X
<i>Cercocarpus brevifolius</i>	mountain mahogany	-	X	X	-	-
<i>Chloris virgata</i>	feather finger	X	-	-	-	-
<i>Condalia lycioides</i>	graythorn	-	-	-	-	-
<i>Ephedra spp.</i>	Mormon tea	X	-	-	-	-
<i>Equisetum arvense</i>	horsetail	-	-	-	-	X
<i>Eragrostis lehmanniana</i>	Lehmann's love grass	X	-	-	-	-
<i>Haplopappus tenuisectus</i>	burrow-weed	-	-	-	-	-
<i>Heteropogon contortus</i>	tanglehead	X	-	X	-	-
<i>Hilaria belangeri</i>	curly mesquite grass	X	-	-	-	-
<i>Hilaria mutica</i>	tobosa	X	-	-	-	-
<i>Juglans major</i>	Arizona walnut	-	-	-	X	-
<i>Juniperus osteosperma</i>	Utah juniper	-	X	X	-	-
<i>Juncus spp.</i>	rush	-	-	-	-	X
<i>Opuntia spp.</i>	prickly pear cactus	X	X	X	-	-
<i>Pinus cembroides</i>	Mexican pinyon pine	-	X	X	-	-
<i>Pinus latifolia</i>	Arizona longleaf pine	-	-	X	-	-
var. <i>apacheca</i>						

Table A1-1 (continued)

REPRESENTATIVE PLANT SPECIES THAT OCCUR OR POTENTIALLY OCCUR AT FORT HUACHUCA

Scientific Name	Common Name	Habitat ^{1/}				
		Grassland	Chaparral	Evergreen Woodland	Riparian Woodland	Marsh
<i>Pinus leiohylla</i>	Chichuahua pine	-	-	X	-	-
var. <i>chichuahua</i>						
<i>Pinus ponderosa arizonica</i>	Arizona ponderosa pine	-	X	X	-	-
<i>Pinus strobiformis</i>	Southwestern white pine	-	-	X	-	-
<i>Plantanus wrightii</i>	Arizona sycamore	-	-	-	X	-
<i>Populus fremontii</i>	Fremont cottonwood	-	-	-	X	-
<i>Prosopis glandulosa</i>	honey mesquite	X	-	-	-	-
<i>Prosopis velutina</i>	velvet mesquite	X	-	-	-	-
<i>Pseudotsuga taxifolia</i>	Douglas fir	-	-	X	-	-
var. <i>glauca</i>						
<i>Quercus arizonia</i>	Arizona oak	-	-	X	-	-
<i>Quercus emoryi</i>	Emory oak	X	-	X	-	-
<i>Quercus gambelii</i>	Gamble oak	-	-	X	-	-
<i>Quercus hypoleucoides</i>	silver leaf oak	-	-	X	-	-
<i>Quercus oblongifolia</i>	Mexican blue oak	X	-	X	-	-
<i>Quercus pungens</i>	scrub oak	-	X	-	-	-
<i>Rhus trilobata</i>	squaw bush	-	X	X	-	-
<i>Robinia neomexicana</i>	New Mexico locust	-	-	X	-	-
<i>Scirpus</i> spp.	bulrush	-	-	-	-	X
<i>Salix</i> spp.	willow	X	-	-	X	X
<i>Sporobolus wrightii</i>	sacaton	X	-	-	-	-
<i>Tridens tridens</i>	desert fluff-grass	X	-	-	-	-
<i>Verbena</i> spp.	verbena	-	X	-	-	-
<i>Yucca elata</i>	yucca	X	X	X	-	-
<i>Zinnia grandiflora</i>	desert zinnia	X	-	-	-	-

^{1/} An X indicates that the species occurs most frequently in that habitat.
It may occur with lesser frequency in one or more of the other habitats.

REFERENCES: Brown, 1982; USDD, ACOE, 1989

Table A1-2

REPRESENTATIVE WILDLIFE SPECIES THAT OCCUR OR POTENTIALLY OCCUR AT FORT HUACHUCA

<u>Scientific Name</u>	<u>Common Name</u>	<u>Habitat</u>				
		<u>Grassland</u>	<u>Chaparral</u>	<u>Evergreen Woodland</u>	<u>Riparian Woodland</u>	<u>Marsh</u>
BIRDS						
<i>Amphispiza bilineata</i>	black-throated sparrow	X	X	-	-	-
<i>Aquila chrysaetos</i>	golden eagle	X	-	X	X	-
<i>Auriparus flaviceps</i>	verdin	-	X	X	-	-
<i>Buteo jamaicensis</i>	red-tailed hawk	X	-	X	X	-
<i>Callipepla gambelii</i>	Gambel's quail	-	X	-	X	-
<i>Callipepla squamata</i>	scaled quail	X	X	-	-	-
<i>Cardinalis sinuatus</i>	pyrrhuloxia	X	X	X	X	-
<i>Carpodacus mexicanus</i>	house finch	X	X	X	X	-
<i>Chondestes grammacus</i>	lark sparrow	X	X	X	-	-
<i>Crytonyx montezumae</i>	Montezuma (Mearns') quail	-	X	X	-	-
<i>Eremophila alpestris</i>	horned lark	X	-	-	X	-
<i>Falco sparverius</i>	American kestrel	X	-	X	-	-
<i>Geococcyx californianus</i>	greater roadrunner	X	-	-	-	-
<i>Mimus polyglottos</i>	mockingbird	-	X	X	X	-
<i>Molothrus ater</i>	brown-headed cowbird	X	-	X	X	-
<i>Myiarchus cinerascens</i>	ash-throated flycatcher	-	X	X	X	-
<i>Otus kennicottii</i>	western screech owl	-	-	X	X	-
<i>Picoides scalaris</i>	ladder-backed woodpecker	X	X	X	X	-
<i>Phainopepla nitens</i>	phainopepla	-	X	X	-	-
<i>Pipilo fuscus</i>	brown towhee	-	X	X	X	-
<i>Sayornis saya</i>	Say's phoebe	X	-	X	-	-
<i>Sturnella neglecta</i>	western meadowlark	X	-	-	X	-
<i>Zenaida macroura</i>	mourning dove	X	-	-	-	-

Table A1-2 (continued)

REPRESENTATIVE WILDLIFE SPECIES THAT OCCUR OR POTENTIALLY OCCUR AT FORT HUACHUCA

Scientific Name	Common Name	Habitat				
		Grassland	Chaparral	Evergreen Woodland	Riparian Woodland	Marsh
MAMMALS						
<i>Antilocapra americana</i>	pronghorn antelope	X	-	-	-	-
<i>Bassariscus astutus</i>	ringtail	-	X	-	-	-
<i>Canis latrans</i>	coyote	X	X	-	-	-
<i>Citellus variegatus</i>	rock squirrel	-	-	X	-	-
<i>Conepatus leuconotus</i>	hog-nose skunk	-	X	-	-	-
<i>Dipodomys merriami</i>	Merriam's kangaroo rat	X	X	-	-	-
<i>Erethizon dorsatum</i>	porcupine	-	-	X	-	-
<i>Felis concolor</i>	mountain lion	-	-	X	X	-
<i>Lepus alleni</i>	antelope jackrabbit	X	-	-	-	-
<i>Lepus californicus</i>	blacktail jackrabbit	X	-	-	-	-
<i>Lynx rufus</i>	bobcat	X	X	X	X	-
<i>Mephitis macroura</i>	hooded skunk	-	-	-	X	-
<i>Mephitis mephitis</i>	striped skunk	X	X	X	X	-
<i>Nasua narica</i>	coatimundi	-	X	X	X	-
<i>Neotoma albigula</i>	Whitethroat woodrat	-	X	X	-	-
<i>Odocoileus hemionus</i>	mule deer	-	-	X	X	-
<i>Odocoileus virginianus</i>	whitetail deer	X	X	X	X	-
<i>Pecari angulatus</i>	peccary, javelina	X	X	-	-	-
<i>Perognathus penicillatus</i>	Desert pocket mouse	X	X	-	-	-
<i>Peromyscus maniculatus</i>	deer mouse	X	X	X	X	-
<i>Procyon lotor</i>	raccoon	-	-	-	X	-
<i>Sciurus arizonensis</i>	Huachuca gray squirrel	-	-	X	-	-
<i>huachuca</i>						
<i>Spilogale putorius</i>	spotted skunk	X	X	X	X	-
<i>Sylvilagus auduboni</i>	desert cottontail	X	X	X	X	-
<i>Taxidea taxus</i>	badger	X	-	X	-	-
<i>Urocyon</i>	gray fox	-	X	X	-	-
<i>cinereoargenteus</i>						
<i>Ursus americanus</i>	black bear	-	-	X	X	-

Table A1-2 (continued)

REPRESENTATIVE WILDLIFE SPECIES THAT OCCUR OR POTENTIALLY OCCUR AT FORT HUACHUCA

Scientific Name	Common Name	Habitat				
		Grassland	Chaparral	Evergreen Woodland	Riparian Woodland	Marsh
REPTILES						
<i>Arizona elegans</i>	glossy snake	X	X	X	-	-
<i>Cnemidophorus tiaris</i>	Western whiptail	-	-	-	-	-
<i>Crotalus atrox</i>	Western diamondback rattlesnake	X	X	X	-	-
<i>Eumeces callicephalus</i>	mountain skink	-	-	-	X	-
<i>Heloderma suspectum</i>	gila monster	X	X	X	X	-
<i>Heterodon nasicus</i>	western hognose snake	X	-	X	X	-
<i>Holbrookia maculata</i>	lesser earless lizard	X	X	X	-	-
<i>Hypsiglena torquata</i>	night snake	X	X	X	X	-
<i>Lampropeltis getulus</i>	common kingsnake	X	X	X	X	X
<i>Leptotyphlops humilis</i>	western blind snake	-	X	-	X	-
<i>Masticophis flagellum</i>	coachwhip	X	-	X	-	-
<i>Micruroides euryxanthus</i>	Arizona coral snake	X	X	X	X	-
<i>Oxybelis aenus</i>	vine snake	-	X	-	X	-
<i>Phrynosoma cornutum</i>	Texas horned lizard	X	-	-	-	-
<i>Phrynosoma douglassii</i>	short-horned lizard	X	X	X	-	-
<i>Phrynosoma modestum</i>	round-tailed horned lizard	-	X	X	-	-
<i>Phrynosoma solare</i>	regal horned lizard	-	X	-	-	-
<i>Pituophis melanoleucus</i>	gopher snake	X	X	X	X	-
<i>Rhinocheilus lecontei</i>	longnosed snake	X	X	-	-	-
<i>Salvadora hexalepis</i>	desert patchnosed snake	X	X	X	-	-
<i>Sceloporus undulatus</i>	eastern fence lizard	X	X	X	X	-
<i>Tantilla nigriceps</i>	plains blackheaded snake	X	X	X	-	-
<i>Tantilla wilcoxi</i>	Huachuca blackheaded snake	X	-	X	-	-
<i>spp. wilcoxi</i>						
<i>Urosaurus ornatus</i>	tree lizard	-	X	X	X	-
<i>Uta stansburiana</i>	side-blotched lizard	X	X	-	-	-
AMPHIBIANS						
<i>Bufo cognatus</i>	Great Plains toad	X	X	-	-	X
<i>Bufo punctatus</i>	red spotted toad	X	X	X	X	X
<i>Rana aurora</i>	red-legged frog	X	-	-	X	X
<i>Scaphiopus couchii</i>	couch spadefoot toad	X	X	X	X	-
<i>Scaphiopus multiplicatus</i>	southern spadefoot toad	X	X	X	-	-

Table A2-1

IMPORTANT SPECIES OF THE GLACIATED NORTHEAST
NORTHERN HARDWOODS REGION

Source: Introduction to Forest Science (Young, 1982)

<u>Common Name</u>	<u>Scientific Name</u>
American beech	<i>Fagus grandifolia</i>
yellow birch	<i>Betula allegheniensi</i>
paper birch	<i>B. papyrifera</i>
sugar maple	<i>Acer saccharum</i>
red maple	<i>A. rubrum</i>
eastern hemlock	<i>Tsuga canadensis</i>
eastern white pine	<i>Pinus strobus</i>
jack pine	<i>P. banksiana</i>
red pine	<i>P. resinosa</i>
bigtooth aspen	<i>Populus grandidentata</i>
northern red oak	<i>Quercus rubra</i>
white ash	<i>Fraxinus americana</i>
American elm	<i>Ulmus americana</i>
northern white cedar	<i>Thuja occidentalis</i>
American basswood	<i>Tilia americana</i>
black cherry	<i>Prunus serotina</i>
red spruce	<i>Picea rubens</i>
white spruce	<i>P. glauca</i>
black spruce	<i>P. mariana</i>
quaking aspen	<i>Populus tremuloides</i>
tamarack	<i>Larix laricina</i>

Table A2-2

WETLANDS VEGETATION AT FORT DEVENS

<u>Common Name</u>	<u>Scientific Name</u>
red maple	<i>Acer rubrum</i>
ash	<i>Fraxinus</i> sp.
hemlock	<i>Tsuga canadensis</i>
white pine	<i>Pinus strobus</i>
winterberry	<i>Ilex verticillata</i>
common elder	<i>Sambucus canadensis</i>
pussy willow	<i>Salix discolor</i>
arrow-wood	<i>Viburnum dentatum</i>
meadow-sweet	<i>Spiraea latifolia</i>
Joe-pye-weed	<i>Eupatorium maculatum</i>
water hemlock	<i>Cicuta maculata</i>
mint	<i>Mentha</i> sp.
sedge	<i>Carex</i> sp.
royal fern	<i>Osmunda regalis</i>
cinnamon fern	<i>Osmunda cinnamomea</i>
marsh fern	<i>Dryopteris</i> sp.
horsetail	<i>Equisetum</i> sp.

Table A2-3

MAMMAL SPECIES KNOWN TO EXIST AT FORT DEVENS

<u>Common Name</u>	<u>Scientific Name</u>
gray fox	<i>Urocyon cinereoargenteus</i>
red fox	<i>Vulpes vulpes</i>
coyote	<i>Canis latrans</i>
*bobcat	<i>Lynx rufus</i>
woodchuck	<i>Marmota monax</i>
eastern chipmunk	<i>Tamias striatus</i>
eastern gray squirrel	<i>Sciurus carolinensis</i>
red squirrel	<i>Tamiasciurus hudsonicus</i>
southern flying squirrel	<i>Glaucomys volans</i>
beaver	<i>Castor canadensis</i>
deer mouse	<i>Peromyscus maniculatus</i>
white-footed mouse	<i>P. leucopus</i>
meadow vole	<i>Microtus pennsylvanicus</i>
muskrat	<i>Ondatra zibethica</i>
pine vole	<i>Pitymys pinetorum</i>
redback vole	<i>Clethrionomys rutilus</i>
Norway rat	<i>Rattus norvegicus</i>
house mouse	<i>Mus musculus</i>
meadow jumping mouse	<i>Zapus hudsonius</i>
woodland jumping mouse	<i>Napaeozapus insignis</i>
porcupine	<i>Erethizon dorsatum</i>
opposum	<i>Didelphis virginiana</i>
*black bear	<i>Ursus americanus</i>
hairy-tailed mole	<i>Parascalops breweri</i>
eastern mole	<i>Scalopus aquaticus</i>
star-nosed mole	<i>Condylura cristata</i>
masked shrew	<i>Sorex cinereus</i>
water shrew	<i>S. palustris</i>
smokey shrew	<i>S. fumeus</i>
short-tailed shrew	<i>Blarina brevicauda</i>
little brown myotis	<i>Myotis lucifugus</i>
Keen's myotis	<i>M. keeni</i>
silver-haired bat	<i>Lasionycteris noctivagans</i>
eastern pipistrel	<i>Pipistrellus subflavus</i>
big brown bat	<i>Eptesicus fuscus</i>
red bat	<i>Lasiurus borealis</i>
hoary bat	<i>L. cinereus</i>
raccoon	<i>Procyon lotor</i>
fisher	<i>Martes pennanti</i>

Table A2-3 (continued)

MAMMAL SPECIES KNOWN TO EXIST AT FORT DEVENS

<u>Common Name</u>	<u>Scientific Name</u>
ermine	<i>Mustela erminea</i>
long-tailed weasel	<i>M. frenata</i>
mink	<i>M. vison</i>
river otter	<i>Lutra canadensis</i>
striped skunk	<i>Mephitis mephitis</i>
**New England cottontail	<i>Sylvilagus transitionalis</i>
eastern cottontail	<i>S. floridanus</i>
snowshoe hare	<i>Lepus americanus</i>
*moose	<i>Alces alces</i>
white-tailed deer	<i>Odocoileus virginianus</i>

Source: Fort Devens, Army Post. Natural Resource Management Program, 1977; Arthur D. Little, Inc., Updated by Tom Poole, Forester, Fort Devens, October 1989.

* Rare; transient individuals sighted during the past ten years.

** Status unknown/may be extirpated from region.

Table A2-4

BIRDS KNOWN TO EXIST AT FORT DEVENS

<u>Common Name</u>	<u>Scientific Name</u>
common loon	<i>Gavia immer</i>
double-crested cormorant	<i>Phalacrocorax auritus</i>
pied-billed grebe	<i>Podilymbus podiceps</i>
great blue heron	<i>Ardea herodias</i>
green heron	<i>Butorides striatus</i>
American bittern	<i>Botaurus lentiginosus</i>
Canada goose	<i>Branta canadensis</i>
mallard	<i>Anas platyrhynchos</i>
black duck	<i>A. rubripes</i>
green-winged teal	<i>A. crecca</i>
blue-winged teal	<i>A. discors</i>
wood duck	<i>Aix sponsa</i>
ring-necked duck	<i>Aythya collaris</i>
lesser scaup	<i>A. affinis</i>
common goldeneye	<i>Bucephala clangula</i>
hooded merganser	<i>Lophodytes cucullatus</i>
common merganser	<i>Mergus merganser</i>
killdeer	<i>Charadrius vociferus</i>
semipalmated plover	<i>C. semipalmatus</i>
American woodcock	<i>Philohela minor</i>
common snipe	<i>Capella gallinago</i>
upland sandpiper	<i>Bartramia longicauda</i>
spotted sandpiper	<i>Actitis macularia</i>
buff-breasted sandpiper	<i>Tryngites subruficollis</i>
greater yellowlegs	<i>Tringa melanoleuca</i>
lesser yellowlegs	<i>T. flavipes</i>
solitary sandpiper	<i>T. solitaria</i>
least sandpiper	<i>Calidris minutilla</i>
semi-palmated sandpiper	<i>C. pusilla</i>
belted kingfisher	<i>Megaceryle alcyon</i>
turkey vulture	<i>Cathartes aura</i>
sharp-shinned hawk	<i>Accipiter striatus</i>
red-tailed hawk	<i>Buteo jamaicensis</i>
red-shouldered hawk	<i>B. lineatus</i>
broad-winged hawk	<i>B. platypterus</i>
marsh hawk	<i>Circus cyaneus</i>
osprey	<i>Pandion haliaetus</i>
merlin	<i>Falco columbarius</i>
American kestrel	<i>F. sparverius</i>

Table A2-4 (continued)

BIRDS KNOWN TO EXIST AT FORT DEVENS

Common Name	Scientific Name
ruffed grouse	<i>Bonasa umbellus</i>
bobwhite	<i>Colinus virginianus</i>
ring-necked pheasant	<i>Phasianus colchicus</i>
rock dove	<i>Columba livia</i>
mourning dove	<i>Zenadia macroura</i>
great horned owl	<i>Bubo virginianus</i>
common night hawk	<i>Chordeiles minor</i>
chimney swift	<i>Chaetura pelagica</i>
common flicker	<i>Colaptes auratus</i>
hairy woodpecker	<i>Picoides villosus</i>
downy woodpecker	<i>P. pubescens</i>
eastern kingbird	<i>Tyrannus tyrannus</i>
great crested flycatcher	<i>Myiarchus crinitus</i>
eastern phoebe	<i>Sayornis phoebe</i>
least flycatcher	<i>Empidonax minimus</i>
eastern wood pewee	<i>Contopus virens</i>
horned lark	<i>Eremophila alpestris</i>
tree swallow	<i>Tachycineta bicolor</i>
bank swallow	<i>Riparia riparia</i>
barn swallow	<i>Hirundo rustica</i>
blue jay	<i>Cyanocitta cristata</i>
common crow	<i>Corvus brachyrhynchos</i>
black-capped chickadee	<i>Parus atricapillus</i>
tufted titmouse	<i>P. bicolor</i>
white-breasted nuthatch	<i>Sitta carolinensis</i>
red-breasted nuthatch	<i>S. canadensis</i>
brown creeper	<i>Certhia americana</i>
house wren	<i>Troglodytes aedon</i>
northern mockingbird	<i>Mimus polyglottos</i>
gray catbird	<i>Dumetella carolinensis</i>
brown thrasher	<i>Toxostoma rufum</i>
American robin	<i>Turdus migratorius</i>
wood thrush	<i>Hylocichla mustelina</i>
hermit thrush	<i>Catharus guttatus</i>
veery	<i>C. fuscescens</i>
European starling	<i>Sturnus vulgaris</i>
red-eyed vireo	<i>Vireo olivaceus</i>
black and white warbler	<i>Mniotilta varia</i>
Nashville warbler	<i>Vermivora ruficapilla</i>

Table A2-4 (continued)

BIRDS KNOWN TO EXIST AT FORT DEVENS

Common Name	Scientific Name
northern parula	<i>Parula americana</i>
yellow warbler	<i>Dendroica petechia</i>
magnolia warbler	<i>D. magnolia</i>
black-throated green warbler	<i>D. caerulescens</i>
chestnut-sided warbler	<i>D. pensylvanica</i>
palm warbler	<i>D. palmarum</i>
ovenbird	<i>Seiurus aurocapillus</i>
northern waterthrush	<i>S. noveboracensis</i>
common yellowthroat	<i>Geothlypis trichas</i>
Canada warbler	<i>Wilsonia canadensis</i>
American redstart	<i>Setophaga ruticilla</i>
house sparrow	<i>Passer domesticus</i>
bobolink	<i>Dolichonyx oryzivorus</i>
eastern meadowlark	<i>Sturnella magna</i>
red-winged blackbird	<i>Agelaius phoeniceus</i>
common grackle	<i>Quiscalus quiscula</i>
brown-headed cowbird	<i>Molothrus ater</i>
scarlet tanager	<i>Piranga olivacea</i>
northern cardinal	<i>Cardinalis cardinalis</i>
rose-breasted grosbeak	<i>Pheucticus ludovicianus</i>
evening grosbeak	<i>Hesperiphonia vespertina</i>
house finch	<i>Carpodacus mexicanus</i>
rufous-sided towhee	<i>Pipilo erythrophthalmus</i>
savannah sparrow	<i>Passerculus sandwichensis</i>
dark-eyed junco	<i>Junco hyemalis</i>
tree sparrow	<i>Spizella arborea</i>
fox sparrow	<i>Passerella iliaca</i>
swamp sparrow	<i>Melospiza georgiana</i>
song sparrow	<i>M. melodia</i>
chipping sparrow	<i>Spizella passerina</i>

Table A2-5

HERPTILES KNOWN TO EXIST AT FORT DEVENS

<u>Common Name</u>	<u>Scientific Name</u>
spotted salamander	<i>Ambystoma maculatum</i>
common newt	<i>Notophthalmus viridescens</i>
red-backed salamander	<i>Plethodon cinereus</i>
two-lined salamander	<i>Eurycea bislineata</i>
American toad	<i>Bufo americanus</i>
Fowler's toad	<i>B. woodhousei</i>
spring peeper	<i>Hyla crucifier</i>
gray treefrog	<i>H. versicolor</i>
bullfrog	<i>Rana catesbeiana</i>
green frog	<i>R. clamitans</i>
leopard frog	<i>R. pipiens</i>
pickerel frog	<i>R. palustris</i>
wood frog	<i>R. sylvatica</i>
snapping turtle	<i>Chelydra serpentina</i>
stinkpot	<i>Sternathaerus odoratus</i>
spotted turtle	<i>Clemmys guttata</i>
wood turtle	<i>C. insculpta</i>
box turtle	<i>Terrapene carolina bauri</i>
painted turtle	<i>Chrysemys picta belli</i>
Blanding's turtle	<i>Eymdoidea blandingii</i>
northern water snake	<i>Nerodia sipedon</i>
brown snake	<i>Storeria dekayi</i>
red-bellied snake	<i>Storeria occipitomaculata</i>
garter snake	<i>Thamnophis sirtalis</i>
ribbon snake	<i>T. sauritus</i>
hognose snake	<i>Heterodon playtyrhinos</i>
ringneck snake	<i>Diadophis punctatus edwardsi</i>
northern black racer	<i>Coluber constrictor foxi</i>
black rat snake	<i>Elephe obsoleta</i>
smooth green snake	<i>Opheodrys vernalis</i>
milk snake	<i>Lampropeltis triangulum</i>

Table A2-6

RARE SPECIES KNOWN TO OCCUR AT FORT DEVENS

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
bald eagle	<i>Haliaeetus leucocephalus</i>	FE
peregrine falcon	<i>Falco peregrinus</i>	FE
upland sandpiper*	<i>Bartramia longicauda</i>	SE
grasshopper sparrow*	<i>Ammodramus savannarum</i>	SE
pied-billed grebe	<i>Podilymbus podiceps</i>	SE
blackpoll warbler	<i>Dendroica striata</i>	SC
American bittern	<i>Botaurus lentiginosus</i>	SC
osprey	<i>Pandion haliaetus</i>	SC
Cooper's hawk	<i>Accipiter cooperii</i>	SC
sharp-shinned hawk	<i>A. striatus</i>	SC
northern harrier	<i>Circus cyaneus</i>	ST
Blanding's turtle*	<i>Emydoidea blandingii</i>	ST
spotted turtle*	<i>Clemmys guttata</i>	SC
wood turtle*	<i>C. insculpta</i>	SC
Eastern box turtle*	<i>Terrapene carolina</i>	SC
northern water shrew*	<i>Sorex palustris</i>	SC
southern bog lemming	<i>Synaptomys cooperi</i>	SC
Mystic Valley amphipod*	<i>Crangonyx aberrans</i>	SC
blue spotted salamander*	<i>Ambystoma laterale</i>	SC
climbing fern*	<i>Lygodium palmatum</i>	SC

Key: FE = listed as federally endangered

FT = listed as federally threatened

SE = listed as state endangered

ST = listed as state threatened

SC = listed as state special concern

* Occurs as year round or migratory/breeding resident (personal communication, Mr. Poole, NRO, Fort Devens, October 1989).

Table A3-1

A PARTIAL LIST OF TREE AND SHRUB SPECIES
PRESENT IN MONMOUTH COUNTY
(Source: Monmouth County Parks System)

<u>Common Name</u>	<u>Scientific Name</u>
TREES	
American beech	<i>Fagus grandifolia</i>
black birch	<i>Betula lenta</i>
gray birch	<i>B. populifolia</i>
black gum	<i>Nyssa sylvatica</i>
red maple	<i>Acer rubrum</i>
Norway maple	<i>A. platanoides</i>
silver maple	<i>A. saccharinum</i>
red mulberry	<i>Morus rubra</i>
white mulberry	<i>M. alba</i>
eastern hemlock	<i>Tsuga canadensis</i>
eastern white pine	<i>Pinus strobus</i>
red pine	<i>P. resinosa</i>
pitch pine	<i>P. rigida</i>
sassafras	<i>Sassafras albidum</i>
bigtooth aspen	<i>Populus grandidentata</i>
quaking aspen	<i>P. tremuloides</i>
swamp white oak	<i>Quercus bicolor</i>
black oak	<i>Q. velutina</i>
white oak	<i>Q. alba</i>
chestnut oak	<i>Q. prinus</i>
willow oak	<i>Q. phellos</i>
pin oak	<i>Q. palustris</i>
white ash	<i>Fraxinus americana</i>
green ash	<i>F. pennsylvanica</i>
American elm	<i>Ulmus americana</i>
Atlantic white cedar	<i>Chamaecyparis thyoides</i>
eastern red cedar	<i>Juniperus virginiana</i>
American basswood	<i>Tilia americana</i>
box elder	<i>Acer negundo</i>
black cherry	<i>Prunus serotina</i>
American chestnut	<i>Castanea dentata</i>
flowering dogwood	<i>Cornus florida</i>
pignut hickory	<i>Carya glabra</i>
shagbark hickory	<i>C. ovata</i>
American holly	<i>Ilex opaca</i>

Table A3-1 (continued)

A PARTIAL LIST OF TREE AND SHRUB SPECIES
PRESENT IN MONMOUTH COUNTY
(Source: Monmouth County Parks System)

<u>Common Name</u>	<u>Scientific Name</u>
TREES (continued)	
ironwood	<i>Carpinus caroliniana</i>
black locust	<i>Robinia pseudo-acacia</i>
honey locust	<i>Gleditsia triacanthos</i>
quaking aspen	<i>Populus tremuloides</i>
Norway spruce	<i>Picea abies</i>
tree-of-heaven	<i>Ailanthus altissima</i>
water tupelo	<i>Nyssa aquatica</i>
black walnut	<i>Juglans nigra</i>
black willow	<i>Salix nigra</i>
weeping willow	<i>S. babylonica</i>
SHRUBS	
black bayberry	<i>Myrica heterophylla</i>
blackberry	<i>Rubus flagellaris</i>
blueberry	<i>Vaccinium</i> spp.
buttonbush	<i>Cephalanthus occidentalis</i>
choke cherry	<i>Prunus virginiana</i>
coralberry	<i>Symphoricarpos orbiculatus</i>
large cranberry	<i>Vaccinium macrocarpon</i>
red-osier dogwood	<i>Cornus stolonifera</i>
common elderberry	<i>Sambucus canadensis</i>
fetter-bush	<i>Lyonia lucida</i>
hawthorn	<i>Crataegus</i> spp.
huckleberry	<i>Gaylussacia</i> spp.
inkberry	<i>Ilex glabra</i>
mountain laurel	<i>Kalmia latifolia</i>
raspberry	<i>Rubus</i> spp.
staghorn sumac	<i>Rhus typhina</i>
poison sumac	<i>R. vernix</i>
winged sumac	<i>R. copallina</i>
witch-hazel	<i>Hamamelis virginiana</i>

Table A3-2

MAMMALS KNOWN TO EXIST IN MONMOUTH COUNTY
(Source: Monmouth County Parks System)

<u>Common Name</u>	<u>Scientific Name</u>
gray fox	<i>Urocyon cinereoargenteus</i>
red fox	<i>Vulpes fulva</i>
woodchuck	<i>Marmota monax</i>
eastern chipmunk	<i>Tamias striatus</i>
eastern gray squirrel	<i>Sciurus carolinensis</i>
red squirrel	<i>Tamiasciurus hudsonicus</i>
southern flying squirrel	<i>Glacomys volans</i>
beaver	<i>Castor canadensis</i>
white-footed mouse	<i>Peromyscus leucopus</i>
meadow vole	<i>Microtus pennsylvanicus</i>
muskrat	<i>Ondatra zibethica</i>
pine vole	<i>Pitymys pinetorum</i>
boreal redback vole	<i>Clethrionomys rutilus</i>
Norway rat	<i>Rattus norvegicus</i>
southern bog lemming	<i>Synaptomys cooperi</i>
house mouse	<i>Mus musculus</i>
meadow jumping mouse	<i>Zapus hudsonius</i>
opossum	<i>Didelphis virginiana</i>
eastern mole	<i>Scalopus aquaticus</i>
star-nosed mole	<i>Condylura cristata</i>
smokey shrew	<i>Sorex fumeus</i>
short-tailed shrew	<i>Blarina brevicauda</i>
least shrew	<i>Cryptotis parva</i>
little brown myotis	<i>Myotis lucifugus</i>
Keen's myotis	<i>M. keeni</i>
small-footed myotis	<i>M. subulatus</i>
silver-haired bat	<i>Lasionycteris noctivagans</i>
eastern pipistrel	<i>Pipistrellus subflavus</i>
big brown bat	<i>Eptesicus fuscus</i>
red bat	<i>Lasiurus borealis</i>
hoary bat	<i>L. cinereus</i>
raccoon	<i>Procyon lotor</i>
long-tailed weasel	<i>Mustela frenata</i>

Table A3-2 (continued)

MAMMALS KNOWN TO EXIST IN MONMOUTH COUNTY
(Source: Monmouth County Parks System)

<u>Common Name</u>	<u>Scientific Name</u>
mink	<i>M. vison</i>
river otter	<i>Lutra canadensis</i>
striped skunk	<i>Mephitis mephitis</i>
New England cottontail	<i>Sylvilagus transitionalis</i>
eastern cottontail	<i>Sylvilagus floridanus</i>
Virginia white-tailed deer	<i>Odocoileus virginianus</i>
European hare	<i>Lepus europaeus</i>

Source: Monmouth County Parks System, "Mammals of Monmouth County, New Jersey".

Table A3-3

BIRDS KNOWN TO EXIST IN MONMOUTH COUNTY
(Source: The Monmouth County Audubon Society)

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>	<u>Season</u>
common loon	<i>Gavia immer</i>	2	W
red-throated loon	<i>G. stellata</i>	2	W
pied-billed grebe	<i>Podilymbus podiceps</i>	2	W
horned grebe	<i>Podiceps auritus</i>	2	W
great blue heron	<i>Ardea herodias</i>	2	Y
green heron	<i>Butorides striatus</i>	2	S
great egret	<i>Casmerodius albus</i>	2	S
snowy egret	<i>Egretta thula</i>	2	S
black-crowned night heron	<i>Nycticorax nycticorax</i>	2	Y
mute swan	<i>Cygnus olor</i>	2	Y
Canada goose	<i>Branta canadensis</i>	1	Y
brant	<i>B. bernicla</i>	2	W
mallard	<i>Anas platyrhynchos</i>	1	Y
black duck	<i>A. rubripes</i>	2	Y
gadwall	<i>A. strepera</i>	2	W
common pintail	<i>A. acuta</i>	2	W
green-winged teal	<i>A. crecca</i>	2	T
blue-winged teal	<i>A. discors</i>	2	S
American wigeon	<i>A. americana</i>	2	W
wood duck	<i>Aix sponsa</i>	2	S
ring-necked duck	<i>Aythya collaris</i>	2	W
canvasback	<i>A. valisineria</i>	1	W
greater scaup	<i>A. marila</i>	1	W
lesser scaup	<i>A. affinis</i>	2	T
common goldeneye	<i>Bucephala clangula</i>	2	W
bufflehead	<i>B. albeola</i>	2	W
white-winged scoter	<i>Melanitta deglandi</i>	2	W
surf scoter	<i>M. perspicillata</i>	2	W
ruddy duck	<i>Oxyura jamaicensis</i>	2	W
common merganser	<i>Mergus merganser</i>	2	W
red-breasted merganser	<i>M. serrator</i>	2	W
killdeer	<i>Charadrius vociferus</i>	2	Y
American woodcock	<i>Philohela minor</i>	2	S
short-billed dowitcher	<i>Limnodromus griseus</i>	2	T
sanderling	<i>Calidris alba</i>	1	W
black-bellied plover	<i>Pluvialis squatarola</i>	2	T
greater yellowlegs	<i>Tringa melanoleuca</i>	2	T
lesser yellowlegs	<i>T. flavipes</i>	2	T

Table A3-3 (continued)

BIRDS KNOWN TO EXIST IN MONMOUTH COUNTY

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>	<u>Season</u>
spotted sandpiper	<i>Actitis macularia</i>	2	S
solitary sandpiper	<i>Tringa solitaria</i>	2	T
least sandpiper	<i>Calidris minutilla</i>	2	T
semi-palmated sandpiper	<i>C. pusilla</i>	1	T
pectoral sandpiper	<i>C. melanotos</i>	2	T
dunlin	<i>C. alpina</i>	2	W
great black-backed gull	<i>Larus marinus</i>	1	Y
herring gull	<i>L. argentatus</i>	1	Y
ring-billed gull	<i>L. delawarensis</i>	1	W
laughing gull	<i>L. atricilla</i>	1	S
Bonaparte's gull	<i>Larus philadelphia</i>	2	W
Forster's tern	<i>Sterna forsteri</i>	2	T
common tern	<i>S. hirundo</i>	2	S
little tern	<i>S. albifrons</i>	2	S
ruddy turnstone	<i>Arenaria interpres</i>	2	T
belted kingfisher	<i>Megasceryle alcyon</i>	2	Y
turkey vulture	<i>Cathartes aura</i>	2	Y
sharp-shinned hawk	<i>Accipiter striatus</i>	2	T
red-tailed hawk	<i>Buteo jamaicensis</i>	2	Y
broad-winged hawk	<i>B. platypterus</i>	2	S
osprey	<i>Pandion haliaetus</i>	2	S
American kestrel	<i>Falco sparverius</i>	2	Y
ruffed grouse	<i>Bonasa umbellus</i>	2	Y
bobwhite	<i>Colinus virginianus</i>	2	Y
ring-necked pheasant	<i>Phasianus colchicus</i>	2	Y
clapper rail	<i>Rallus longirostris</i>	2	Y
American coot	<i>Fulica americana</i>	1	W
semipalmated plover	<i>Charadrius semipalmatus</i>	2	T
rock dove	<i>Columba livia</i>	1	Y
mourning dove	<i>Zenaida macroura</i>	1	Y
yellow-billed cuckoo	<i>Coccyzus americanus</i>	2	S
black-billed cuckoo	<i>C. erythrophthalmus</i>	2	S
screech owl	<i>Otus asio</i>	2	Y
great horned owl	<i>Bubo virginianus</i>	2	Y
chimney swift	<i>Chaetura pelagica</i>	2	S
common flicker	<i>Colaptes auratus</i>	2	Y
downy woodpecker	<i>Picoides pubescens</i>	2	Y
eastern kingbird	<i>Tyrannus tyrannus</i>	2	S
great crested flycatcher	<i>Myiarchus crinitus</i>	2	S

Table A3-3 (continued)

BIRDS KNOWN TO EXIST IN MONMOUTH COUNTY

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>	<u>Season</u>
eastern phoebe	<i>Sayornis phoebe</i>	2	S
eastern wood pewee	<i>Contopus virens</i>	2	S
tree swallow	<i>Iridoprocne bicolor</i>	1	S
roughed-winged swallow	<i>Stelgidopteryx ruficollis</i>	2	S
barn swallow	<i>Hirundo rustica</i>	1	S
purple martin	<i>Progne subis</i>	2	S
blue jay	<i>Cyanocitta cristata</i>	1	Y
American crow	<i>Corvus brachyrhynchos</i>	1	Y
fish crow	<i>C. ossifragus</i>	2	Y
Carolina chickadee	<i>Parus carolinensis</i>	1	Y
tufted titmouse	<i>P. bicolor</i>	1	Y
white-breasted nuthatch	<i>Sitta carolinensis</i>	2	Y
brown creeper	<i>Certhia familiaris</i>	2	W
house wren	<i>Troglodytes aedon</i>	2	S
Carolina wren	<i>Thryothorus ludoricianus</i>	2	Y
northern mockingbird	<i>Mimus polyglottos</i>	1	Y
gray catbird	<i>Dumetella carolinensis</i>	1	S
brown thrasher	<i>Toxostoma rufum</i>	2	S
American robin	<i>Turdus migratorius</i>	1	Y
wood thrush	<i>Hylocichla mustelina</i>	2	S
hermit thrush	<i>Catharus guttatus</i>	2	T
Swainson's thrush	<i>C. ustulatus</i>	2	T
veery	<i>C. fuscescens</i>	2	S
blue-gray gnatcatcher	<i>Polioptila caerulea</i>	2	S
golden-crowned kinglet	<i>Regulus satrapa</i>	2	T
ruby-crowned kinglet	<i>R. calendula</i>	2	T
cedar waxwing	<i>Bombycilla cedrorum</i>	2	Y
European starling	<i>Sturnus vulgaris</i>	1	Y
white-eyed vireo	<i>Vireo griseus</i>	2	S
solitary vireo	<i>V. solitarius</i>	2	T
red-eyed vireo	<i>V. olivaceus</i>	2	S
black and white warbler	<i>Mniotilta varia</i>	2	T
Nashville warbler	<i>Vermivora ruficapilla</i>	2	T
blue-winged warbler	<i>V. pinus</i>	2	S
northern parula	<i>Parula americana</i>	2	T
yellow warbler	<i>Dendroica petechia</i>	2	S
magnolia warbler	<i>D. magnolia</i>	2	T
Cape May warbler	<i>D. tigrina</i>	2	T

Table A3-3 (continued)

BIRDS KNOWN TO EXIST IN MONMOUTH COUNTY

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>	<u>Season</u>
black-throated blue warbler	<i>D. caerulescens</i>	2	T
yellow-rumped warbler	<i>D. coronata</i>	1	W
black-throated green warbler	<i>D. caerulescens</i>	2	T
chestnut-sided warbler	<i>D. pensylvanica</i>	2	T
bay-breasted warbler	<i>D. castanca</i>	2	T
blackpoll warbler	<i>D. striata</i>	2	T
pine warbler	<i>D. pinus</i>	2	S
prairie warbler	<i>D. discolor</i>	2	S
palm warbler	<i>D. palmarum</i>	2	T
ovenbird	<i>Seiurus aurocapillus</i>	2	S
Louisiana waterthrush	<i>S. motacilla</i>	2	S
common yellowthroat	<i>Geothlypis trichas</i>	1	S
Canada warbler	<i>Wilsonia canadensis</i>	2	T
American redstart	<i>Setophaga ruticilla</i>	2	S
house sparrow	<i>Passer domesticus</i>	1	Y
eastern meadowlark	<i>Sturnella magna</i>	2	S
red-winged blackbird	<i>Agelaius phoeniceus</i>	1	Y
northern oriole	<i>Icterus galbula</i>	2	S
common grackle	<i>Quiscalus quiscula</i>	1	Y
brown-headed cowbird	<i>Molothrus ater</i>	1	Y
scarlet tanager	<i>Piranga olivacea</i>	2	S
northern cardinal	<i>Cardinalis cardinalis</i>	1	Y
rose-breasted grosbeak	<i>Pheucticus ludovicianus</i>	2	T
indigo bunting	<i>Passerina cyanea</i>	2	S
evening grosbeak	<i>Hesperiphona vespertina</i>	2	W
house finch	<i>Carpodacus mexicanus</i>	1	Y
American goldfinch	<i>Carduelis tristis</i>	2	Y
rufous-sided towhee	<i>Pipilo erythrophthalmus</i>	1	S
sharp-tailed sparrow	<i>Ammospiza caudacuta</i>	2	S
seaside sparrow	<i>A. maritima</i>	2	S
dark-eyed junco	<i>Junco hyemalis</i>	1	W
tree sparrow	<i>Spizella arborea</i>	2	W
fox sparrow	<i>Passerella iliaca</i>	2	T

Table A3-3 (continued)

BIRDS KNOWN TO EXIST IN MONMOUTH COUNTY

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>	<u>Season</u>
swamp sparrow	<i>M. georgiana</i>	2	Y
song sparrow	<i>Melospiza melodia</i>	1	Y
chipping sparrow	<i>Spizella passerina</i>	2	S
field sparrow	<i>S. pusilla</i>	2	Y
white-throated sparrow	<i>Zonotrichia albicollis</i>	1	W

Key:

- 1 - Abundant
- 2 - Common
- W - Winter
- S - Summer
- Y - Year-round
- T - Transient

Source: The Monmouth County Audubon Society, "Birds of Monmouth County, New Jersey".

Table A3-4

HERPTILES KNOWN TO EXIST IN MONMOUTH COUNTY
(Source: Monmouth County Parks System)

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
red spotted newt	<i>Notophthalmus v. viridiscens</i>	U
spotted salamander	<i>Ambystoma maculatum</i>	U
marbled salamander	<i>A. opacum</i>	U
red-backed salamander	<i>Plethodon cinereus</i>	C
dusky salamander	<i>Desmognathus f. fuscus</i>	U
four-toed salamander	<i>Hemidactylium scutatum</i>	U
two-lined salamander	<i>Eurycea bislineata</i>	U
northern red salamander	<i>Pseudotriton r. ruber</i>	U
eastern mud salamander	<i>P. m. montanus</i>	U
eastern spadefoot	<i>Scaphiopus h. holbrookii</i>	C
Fowler's toad	<i>B. woodhousei</i>	C
spring peeper	<i>Hyla crucifier</i>	C
gray tree frog	<i>H. versicolor</i>	U
pine barrens tree frog	<i>H. andersoni</i>	U
N.J. chorus tree frog	<i>Pseudacris triseriata kalmi</i>	C
bullfrog	<i>Rana catesbeiana</i>	C
green frog	<i>R. clamitans</i>	C
northern leopard frog	<i>R. pipiens</i>	C
pickerel frog	<i>R. palustris</i>	C
wood frog	<i>R. sylvatica</i>	C
carpenter frog	<i>R. virgatipes</i>	U
northern cricket frog	<i>Acris crepitans</i>	U
common snapping turtle	<i>Chelydra serpentina</i>	C
stinkpot	<i>Sternathaerus odoratus</i>	C
spotted turtle	<i>Clemmys guttata</i>	C
wood turtle	<i>C. insculpta</i>	R
bog turtle	<i>C. muhlenbergii</i>	R
eastern mud turtle	<i>Kinosternon s. subrubrium</i>	U
eastern box turtle	<i>Terrapene carolina bauri</i>	C
eastern painted turtle	<i>Chrysemys picta belli</i>	C
diamondback terrapin	<i>Malaclemys terrapin</i>	C
northern water snake	<i>Natrix s. sipedon</i>	C
northern brown snake	<i>Storeria dekayi</i>	C
red-bellied snake	<i>S. occipitomaculata</i>	U
eastern garter snake	<i>Thamnophis sirtalis</i>	C
eastern ribbon snake	<i>T. sauritus</i>	U
eastern hognose snake	<i>Heterodon playtyrhinos</i>	C

Table A3-4 (continued)

HERPTILES KNOWN TO EXIST IN MONMOUTH COUNTY

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
northern ringneck snake	<i>Diadophis punctatus edwardsi</i>	C
northern black racer	<i>Coluber constrictor foxi</i>	C
black rat snake	<i>Elaphe obsoleta</i>	U
corn snake	<i>E. guttata</i>	R
scarlet snake	<i>Cemophora coccinea</i>	R
rough green snake	<i>Opheodrys aestivus</i>	U
eastern milk snake	<i>Lampropeltis t. triangulum</i>	C
eastern kingsnake	<i>L. g. getulus</i>	U
eastern worm snake	<i>Carphophis a. amoenus</i>	R
timber rattler	<i>Crotalus horridus</i>	R
northern fence lizard	<i>Sceloporus undulatus hyacinthinus</i>	C
five-lined skink	<i>Eumeces fasciatus</i>	R

Key:

C = Common

U = Uncommon

R = Rare

Table A3-5

FISH SPECIES KNOWN TO EXIST IN MONMOUTH COUNTY

(Source: FEIS for the Naval Weapons Station

Earle, Colts Neck, New Jersey, 1980)

<u>Common Name</u>	<u>Scientific Name</u>
menhaden	<i>Brevoortia tyrannus</i>
striped bass	<i>Morone saxatilis</i>
white perch	<i>M. americana</i>
bluefish	<i>Pomatomus saltitrix</i>
winter flounder	<i>Pseudopleuronectes americanus</i>
alewife	<i>Alosa pseudoharengus</i>
blueback herring	<i>A. aestivalis</i>
scup	<i>Stenotomus chrysops</i>
catfish	<i>Ictalurus</i> spp.
minnows	<i>Cyprinus</i> spp.
carp	<i>C. carpio</i>
white sucker	<i>Catostomus commersoni</i>
crappy	<i>Pomoxis</i> spp.
rainbow trout	<i>Salmo gairdneri</i>
brook trout	<i>Salvelinus fontinalis</i>
sunfish	<i>Lepomis</i> spp.

Table A3-6

THREATENED AND ENDANGERED SPECIES KNOWN
TO OCCUR IN MONMOUTH COUNTY

(Source: NJ Div. of Fish, Game and Wildlife, 1987)

<u>Common Name</u>	<u>Scientific Name</u>
shortnose sturgeon	<i>Acipenser brevirostrum</i>
bald eagle	<i>Haliaeetus leucocephalus</i>
peregrine falcon	<i>Falco peregrinus</i>
piping plover	<i>Charadrius melodus</i>
eskimo curlew	<i>Numenius borealis</i>
barred owl	<i>Strix varia</i>
black skimmer	<i>Rynchops niger</i>
bog turtle	<i>Clemmys muhlenbergii</i>
wood turtle	<i>C. insculpta</i>
Cooper's hawk	<i>Accipiter cooperii</i>
grasshopper sparrow	<i>Ammodramus savannarum</i>
least tern	<i>Sterna antillarum</i>
osprey	<i>Pandion haliaetus</i>
pied-billed grebe	<i>Podilymbus podiceps</i>
pine barrens treefrog	<i>Hyla andersonii</i>
pine snake	<i>Pituophis melanoleucus</i>
red-headed woodpecker	<i>Melanerpes erythrocephalus</i>
savannah sparrow	<i>Passerculus sandwichensis</i>
timber rattlesnake	<i>Crotalus horridus</i>
upland sandpiper	<i>Bartramia longicauda</i>
vesper sparrow	<i>Pooecetes gramineus</i>

APPENDIX B

PUBLIC INVOLVEMENT AND CORRESPONDENCE

TABLE OF CONTENTS

Page

SECTION B-1 - CORRESPONDENCE RECEIVED PRIOR TO AVAILABILITY OF THE DEIS

Installation:

FORT HUACHUCA

Thomas Spalding, Arizona Game and Fish Department, 21 June 1989	B-1
George P. Michael, Jr., City of Sierra Vista, 15 June 1989	B-3
Billie J. Fabijan for Congressman Jim Kolbe, 28 September 1989	B-5
Pat Shannon, Consultants in Association, 22 June 1989	B-6
David S. Whiteway, Jr., 5 July 1989	B-8
Julius O. Klein, Undated	B-9
Vaughn W. Peavy, 4 December 1989	B-12

FORT DEVENS

Elizabeth Higgins Congram, U.S. Environmental Protection Agency, 11 July 1989	B-13
Gordon E. Beckett, U.S. Fish and Wildlife Service, 9 June 1989.	B-15
Don S. Stoddard, Massachusetts Dept. of Environmental Management, 9 June 1989	B-16
Neville Markham, Ayer Public Schools, 21 November 1989.	B-17
Vernon Lang, U.S. Fish and Wildlife Service, 6 October 1989	B-19
Jay Copeland, Massachusetts Natural Heritage Program, 12 October 1989	B-21
Neville Markham, Ayer Public Schools, 13 December 1989	B-22
Valeria A. Talmage, State Historic Preservation Officer, Massachusetts Historical Commision, 22 January 1990	B-25
Neville Markham, Ayer Public Schools, 23 January 1990	B-26
Neville Markham, Ayer Public Schools, 9 January 1990	B-27

TABLE OF CONTENTS

	<u>Page</u>
SECTION B-2 - CORRESPONDENCE RECEIVED AFTER AVAILABILITY OF THE DEIS	
<u>Agencies:</u>	
Gilbert D. Metz, USDI Fish and Wildlife Service, 15 March 1990	B-28
Gordon E. Beckett, USDI Fish and Wildlife Service, 14 March 1990	B-29
Sam F. Spiller, USDI Fish and Wildlife Service, 23 March 1990	B-30
Elizabeth Higgins Congram, U.S. Environmental Protection Agency, 11 April 1990	B-32
Nathaniel Dexter, Montachusett Regional Planning Commission, 30 March 1990	B-42
Robert E. Gasser, Arizona State Parks, 26 March 1990	B-43
Lawrence Schmidt, State of New Jersey Department of Environmental Protection, 13 March 1990	B-44
<u>Congressman:</u>	
Senator Dennis DeConcini, 27 April 1990	B-45
Senator Dennis DeConcini, 30 November 1989	B-46
<u>Organizations:</u>	
Stephen H. Burrington, Conservation Law Foundation of New England, Inc.	B-49
Joseph D. Spound, Spound Development Associates	B-52
<u>Individuals:</u>	
Joseph E. Patz, Sierra Vista, AZ, 24 March, 1990	B-53
Charles C. Smrz, Sierra Vista, AZ, 23 March 1990	B-59
Jack Penkoske, Sierra Vista, AZ, 23 March 1990	B-60
Glenn and Susan S. Finelsen, Sierra Vista, AZ, 6 April 1990	B-62
Thomas M. Reardon, Sierra Vista, AZ, 5 April 1990	B-66
Harry E. Wilson, Bremerton, WA, 14 April 1990	B-70
Rita Jackson, Sierra Vista, AZ, 12 April 1990	B-71
SECTION B-3 - TRANSCRIPT OF THE FORT HUACHUCA PUBLIC HEARING	B-72
SECTION B-4 - TRANSCRIPT OF THE FORT DEVENS PUBLIC HEARING . .	B-89

RE SE MOFFORD, Governor

S. W. WERNER, Tucson, Chair
MAS. L. WOODS, JR., Phoenix
JIP W. ASHCROFT, Eagar
DON. L. WHITING, Klondyke
Y TA LOR, Yuma

NE L SHROUFE

V. D. CHUR
MAS. V. SPALDING



ARIZONA GAME & FISH DEPARTMENT

2222 West Greenway Road Phoenix, Arizona 85023 942-3000

June 21, 1989

Colonel Tadahiko Ono
U.S. Army Corps of Engineers
Los Angeles District Office
P. O. Box 2711
Los Angeles, CA 90053

Dear Colonel Ono:

On June 10th, Governor Mofford issued the attached Executive Order No. 89-16 (Streams and Riparian Resources). You may want to appraise your staff of its existence.

Perhaps the most important direction is No. 1, which directs all state agencies to determine the impacts of their policies and operations upon streams and riparian resources and, where appropriate, implement changes that allow for restoration.

Because the Order further directs formation of a habitat task group, you may wish to offer your services to Ms. Alicia Bristow of the Arizona Commission on the Environment. Participation of federal agencies will be of value in fulfilling the directive to establish a state classification system, inventory of riparian areas, and identification of key areas.

If the Governor's directives are to be carried out, certainly consistency with existing federal programs would be valuable.

Sincerely,

Thomas Spalding
Deputy Director

TS:LR:1kl

Attachment

EXECUTIVE ORDER
NO. 89-16

STREAMS AND RIPARIAN RESOURCES

WHEREAS, trees, shrubs, and grasses that grow along Arizona's surface and subsurface water courses form one of the State's most unique, rare, and endangered ecosystems: streams and riparian areas; and

WHEREAS, riparian resources are of substantial economic importance to the State of Arizona due to their numerous uses for grazing, mining, farming, timber harvesting, recreational and residential development; and

WHEREAS, stream and riparian areas in their natural condition can increase groundwater recharge, maintain or improve water quality, provide recreational opportunities and wildlife habitat, and offer open space with aesthetic and natural values; and

WHEREAS, Arizona's population growth will bring additional pressure to bear upon these rapidly diminishing resources; and

WHEREAS, to facilitate the accomplishment of statewide recognition, protection, and proper utilization of Arizona's stream and riparian resources, state and federal agencies and citizen groups have for the past fifteen months assessed the issues surrounding the management of riparian resources;

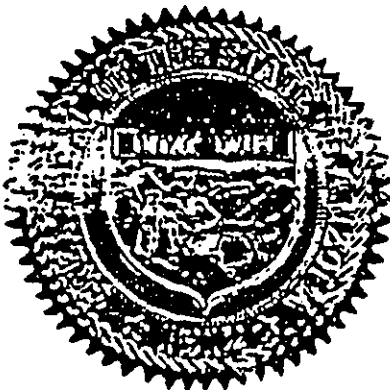
NOW, THEREFORE, I, Rose Mofford, Governor of the State of Arizona, do hereby direct:

1. All state agencies to determine whether current and proposed policies, actions, requirements, and funding impact on stream and riparian resources and, when appropriate, to implement changes that will allow for restoration of riparian resources; and

2. The formation of a riparian habitat task force composed of representatives from the State Land Department, State Parks Department, Department of Water Resources, Department of Environmental Quality, Game and Fish Department, Department of Commerce, Office of Tourism, Department of Transportation, and the State Geologic Survey which shall be chaired by a representative of the Commission on the Arizona Environment. The task force shall:

- a) develop a classification system for riparian habitat to be used by all State agencies;
- b) inventory existing riparian areas;
- c) identify key riparian areas;
- d) make recommendations for further State agency action, public awareness and education programs, and incentives for private landowner cooperation;
- e) consult with members of the public, Indian tribes, local government, federal agencies, and private groups;
- f) make legislative recommendations;
- g) report its findings and recommendations to the Governor no later than October 31 of each year.

IN WITNESS WHEREOF, I have hereunto set my hand and caused to be affixed on the Great Seal of the State of Arizona.



GOVERNOR

DONE at the Capitol in Phoenix this tenth day of June in the Year of Our Lord One Thousand Nine Hundred and Eighty-Nine and of the Independence of the United States of America the Two Hundred and Thirteenth.

ATTEST:

Secretary of State



City of Sierra Vista

2400 E. TACOMA STREET
SIERRA VISTA, AZ 85635
(602) 458-3315

June 15, 1989

U.S. Army
Corps of Engineers
P.O. Box 2711
Los Angeles, CA
90053-2325

Attn: Ms. Lee Hackeling
CESPL-PD-RQ

SUBJECT: EIS for Base Realignment Fort Huachuca, AZ.

Please address the following topics and specific questions in the referenced Environmental Impact Statement:

1. Impact on local transportation network --

- a) Will the current passenger boardings at our airport change?
- b) Will total aircraft traffic at our joint use airport be effected?
- c) Will vehicle traffic volumes entering and leaving Fort Huachuca change? Are peak hourly volumes expected to change?

2. Impact on local Utility Systems --

- a) Will there be a change in the amount of off-post versus on-post housing requirements? Please consider ISC personnel who may retire rather than move.
- b) Do the military sewage treatment facilities have adequate capacity to accommodate the change? If not, does the military contemplate diverting all or part of their sewage to the civilian facilities?
- c) Will there be a change in the amount of ground water extracted from the San Pedro River Basin for water distribution?
- d) Will there be a change in the solid waste contributed to the local landfill?

3. Impact on leisure activity facilities --

- a) Will there be any change in use of civilian park and recreation facilities by military and civilian personnel?

4. Impact on local Tax Revenues --

- a) What will be the change in population and population dependent Federal, State and local tax formulas?
- b) What change will there be in local purchasing and sales tax revenue? Consider both direct military purchases and indirect purchases by military and civilian personnel.

In evaluating the above, it would be of greatest benefit if it was inclusive of other tenant changes contemplated at Fort Huachuca. We have heard of other units coming, but have no information to anticipate the impact and plan for the change.

Should you have any questions, or if we can be of assistance, please let me know.

Best regards,



George P. Michael, Jr. P.E.
Director of Public Works

GPM/mkp

Copy: Michael Goyer

BASEREALIG/GPM/QTXT/8601

~~JIM KOLBE~~
5TH DISTRICT, ARIZONA

COMMITTEE ON
APPROPRIATIONS

SUBCOMMITTEE ON
COMMERCE, JUSTICE,
STATE, AND JUDICIARY
SUBCOMMITTEE ON
MILITARY CONSTRUCTION



Congress of the United States
House of Representatives
Washington, DC 20515

September 28, 1989

WASHINGTON OFFICE:
1222 LONGWORTH HOUSE OFFICE BUILDING
WASHINGTON, DC 20515
(202) 225-2542

ARIZONA OFFICES:
1661 NORTH SWAN ROAD, SUITE 112
TUCSON, AZ 85712
(602) 322-3555

222 COTTONWOOD LANE, SUITE 113
CASA GRANDE, AZ 85222
(602) 836-6364

77 CALLE PORTAL, SUITE B-160
SIERRA VISTA, AZ 85635
(602) 459-3115

REPLY TO

Jonathan Freedman, CESPL-PD-RQ
USAED, Los Angeles
Post Office Box 2711
Los Angeles, CA 90053-2325

Dear Mr. Freedman:

With reference to the letter signed by Colonel Charles S. Thomas, dated September 13th, I am writing to request two copies of the Summary Report re the Public Scoping Meeting for the proposed realignment of activities at Fort Huachuca, Arizona.

I made several attempts to contact you by telephone to request these reports, but no one ever answered your telephone.

Please send the reports to my Sierra Vista, Arizona office.

Sincerely,

Billie J. Fabijan
District Aide
Congressman Jim Kolbe

Ff

CONSULTANTS IN ASSOCIATION

"Specialists in Economic Development"

FRANK T. MORO
77 CALLE PORTAL, A160
SIERRA VISTA, AZ 85635
(602) 459-2712
623-4319

MEMORANDUM
June 22, 1989

PAT SHANNON
F-160 RT. # 1 - Box 215R
DOUGLAS, AZ 85607
(602) 364-3944
459-2712

TO: Ms. Lee Hackeling-CES FL-PD-RQ
US Army, Corps of Engineers
PO Box 2711
Los Angeles, CA 90053-2325

From: Pat Shannon
77 Calle Portal, Suite A160
Sierra Vista, AZ 85635

References: Public notice, undated, EIS

Subject: Environmental Impact Statement scoping meeting for Base
realignment and closure program for Ft. Huachuca, Arizona.

Comments:

Will the Environmental Impact Statement contain environmental
data relative to:

1. Increase of student class load to 1710 each ten (10) weeks
for the period 1990-1995.
2. Construction of a 500,000 gallon jet fuel storage facility
at Libby Field to support increased National Guard and Air Force
training use of Libby Field.
3. Training facilities for USAFC-130 aircraft at Libby Field and
impact.
4. Potential need for approximately 25 additional military sub-
contractors facilities in Huachuca City and Sierra Vista, Arizona
1990-1993.
5. Reopening of Ft. Huachuca's north gate to accommodate a USAF
increased use of Libby Field by 1993.
6. Potential reestablishment of the S.P.R.R right-of-way (still
available) to serve the increase in heavy load type deliveries to
Ft. Huachuca.

Page 2

7. Relocation of other command and Ft. Huachuca. The above comments are vital to the economic base of this area, and in my opinion, should be included in any factual EIS being prepared by the District Engineer Office, so that the civilian government and community can be prepared to support any realignment being considered for Ft. Huachuca, Arizona.

8. What defense contractors will leave Sierra Vista when the ISC move.

cc: Honorable Jim Kolbe
Honorable Dennis DeConcini
Mayor of Huachuca City
Mayor of Sierra Vista
Chairman Huachuca City IDA
Chairman Sierra Vista IDA

TO: MR RICH MACIAS

July 5, 1989

CESPL-PD-RQ

(TEL: (213) 894-3397)

FAX: 213-894-5312

US ARMY CORPS OF ENGINEERS

PO Box 2711

LOS ANGELES, CALIF.

90053 - 2325

FROM: DAVID S. WHITEWAY JR

P.O. Box 747

SIERRA VISTA AZ

85636 - 0747

SUBJ: SCOPE - FT HUACHUCA, ARIZONA, BASE REALIGNMENT
AND CLOSURE PROGRAM

DEAR SIR:

A NEW RUMOR.

WITH THE ANNOUNCEMENT OF BUILDING A NEW BARRACK
COMPLEX AT FT HUACHUCA, ARIZONA, THERE IS A NEW AREA
OF IMPACT THAT I WOULD LIKE ADDRESSED.

THE RUMOR IS THAT FORT HUACHUCA, ARIZONA WILL BE
LOSING 3000 HOME OWNER/RENTOR SLOTS AND BE
REPLACED BY 2500 STUDENT/TRANSIT SLOTS.

RUMORS ASIDE, I WOULD LIKE THE IMPACT OF LOSS OF
RENTOR SLOTS AT FT HUACHUCA, ARIZONA HAS ON THE SMALL
ONE, TWO AND THREE UNIT RENTOR BE REVIEWED.

David S. Whitley Jr.

DAVID S. WHITEWAY, JR.

B-8 602-378-2874

U.S. Army Corps of Engineers
P.O. Box 2711
ATTN: Mr. Rich Macias
Los Angeles, CA
90052-2325

Mr. Macias, Environmental Impact Scoping Committee

I attended the EIS meeting in Sierra Vista on 22 Jun 89. I, we, the people of the community, were not prepared for what occurred. That is, we were expecting you to say what you were looking for, and what you required to continue the study. What we got was, "We're doing a study. We want your input." Period. End of meeting. There was no call in the press or announcements that said, "Gather your facts and present data that might help us reach a decision." Mr. Manring, Mr. Slater, and Mr. Hass were able to bring some facts and a few figures, but I'm sure you want more firm data in hand to analyze, not word of mouth. We citizens that attended don't have much in the way of city sales tax, projected growth, volume of sales information, only how the move will affect our personal lives. As was mentioned at the meeting, it seems like you are just going through the motions, the move is going to take place and you are only doing your part to push the paper through the process. I understand that you have no interest in this town, in this community. To you, it is probably a place in the desert, another job, "Let's get this over with and go back home."

But for many of us, this is home. This is the place we chose to live, to put down our roots, where we raised our children, brought our parents, established businesses and lives and friends we hoped never to part from again. Most of us have travelled throughout the world, either as military or civilian workers. We've seen the east, and the west, and all the points in between. And we chose this place to call home. Now, what appears to be an arbitrary and underhanded political maneuver, we are going to be forced to make a major decision in life. Do we stay in a place we love, with the prospect of no job or at best a lower paying job, or do we move. Most of the people I speak with are of one mind, "If I move, it will not be to Fort Devens. I'll move overseas, or to another place in the states, but I won't go to Devens."

All of that was a preface to this, "It doesn't take a lot to know that if you move 2,000 high paying jobs out of an area that is basically a one industry community, you are going to have a depressed area. If you multiply those 2,000 jobs times three of four (for families), you are taking about 6,000 to 8,000 people

from the community. If you remove 1,000 or more students from the school district, you are going to impact that district. If you add another 500 to 600 homes to a market already saturated with 500 homes for sale, you are going to have a depressed area. If you add all the contractor related jobs and the support required to attend those 2,000 jobs, you know, without putting pencil to paper that the community is going to be impacted. The tax base for the USAISC to this community is well over \$50.0M per year. You take that away and there will be an impact." If you bring in a transient population, one that is younger, with fewer and younger families, with different life-styles, one who will generally remain on post, spend their money on post, not purchase houses, or improve lots, or contribute towards the community, you know you are going to impact that community. You know that up front.

Here are some figures quoted from the Arizona Daily Star, the Tucson Newspaper, 12 Jan 89, "Loss of jobs from Fort Huachuca, 2,000; jobs gained from Fort Devens, 1,400, net loss 600 jobs. Loss of retail sales \$143.8M. Loss of wage income, \$74.4M. Drop in property value, \$31.5M." Not counting the personal cost of a move, the cost of operating the USAISC will increase dramatically due to the high cost area to which it is proposed to move. Administrative support in paper goods, foods, utilities, maintenance engineering, refurbishing, construction, communications requirements, security enhancements, reestablishing the worldwide network to accomplish the mission, acquiring qualified engineer support...and on, and on, and on, and on.

The USAISC operates a several huge computer systems as part of the management information system and circuit leasing office. They will either have to be replaced, at a cost of millions; or shutdown, packed, moved, reinstalled, tested, and reprogrammed. All of which could take up to a year. There are newly constructed secure facilities that would have to be moved, under the same scenario as above. Testing facilities, communications centers.

When I look at Fort Devens, and the impact of closing that facility (which has been on hit lists for the past ten years) I see a multi-industry economy that is moving ever westward and encroaching on the Fort Devens area. I see a post surrounded by urban sprawl, whose neighbors complain about the military presence. It is a fact that the Boston area supports most residents in and around the Fort Devens area; that bedroom communities surround the post, with services directed to support those communities; that the surrounding communities do not rely on Fort Devens for support; that if they lost the post the effect would be short term at worst, probably recovering within five years.

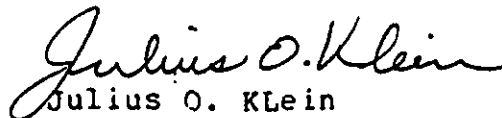
I have doubt that this will happen, but I would recommend that an economic impact be conducted at the Fort Devens area to reveal what the impact on the community would be if that post were deactivated or reduced in size or stature. Whatever is, it would have to be less than \$144.0M/year. Comparing the two posts, their functions, their support elements, and the impact on the communities, I dare say that Fort Huachuca/Sierra Vista is more heavily impacted than Fort Devens/Ayers.

This post and this community have grown together over the last 20 years. This has been a partnership unlike most military posts and townships that grow around them. This community has become close knit, one sharing in the bounty and growth of the other, working to make sure the needs of citizens and soldiers alike are tended to. There are no notorious bars, dance halls, or movie houses that are common enough in most military towns. There are no rip-off dives, no sleazy hotels, no girls (or boys) working the streets. What we have built here is a town and a post that we are proud of, a place we are happy to share, a place where people want to return to to settle in, to raise their families, to retire in, a place they want to call home. Our standards have been high and a large part of that is due to that "high grade level, stable population of USAISC, both military and civilian."

I firmly believe that if you gather the facts, the facts of this community, and compare them with a similar set of facts from the Fort Devens area there is only one conclusion that can be derived, "That moving the USAISC from Fort Huachuca and relocating it at Fort Devens, MA, the full width of the United States away, is too very expensive. That the socioeconomic impact on the Sierra Vista/Fort Huachuca area would be devastating to the community. That unless there is massive government assistance to provide jobs for those who choose not to move with the command, there will be massive unemployment. That the fabric of this community will be severely damaged for years to come."

Yes, we've heard the stories about other base closures and how the communities survived, but they were never the same community again. They changed, and not always for the better. We want something better for this place we call home. We want to see a steady growth, well balanced with our needs, being able to care for and provide for those in need in our community, to take pride in our young people who come here in uniform to train, to care for them as we care for our own children as they take the journey into adulthood.

Above all else, please understand this one thing, "This is our home."


Julius O. Klein
1920 Foothills Dr.
Sierra Vista, AZ



4 Dec 89

Re: The public hearing on
the Draft Environmental
Impact Statement.

This is to inform you we
have moved from 2207 Sonoma
Dr., Sierra Vista, AZ 85635

To 5639 Wood @ LMB
San Antonio, TX, 78233

Although we won't be there
We would appreciate a copy
of the results -

Sincerely
Vaughn W. Leavelle

VAUGHN W. LEAVELLE

We were slightly lucky - After
the home sold in 9 mos., we got
over \$17,000.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION I

J.F. KENNEDY FEDERAL BUILDING, BOSTON, MASSACHUSETTS 02203-2211

July 11, 1989

Ms. Sue Brown
Impact Analysis Branch, Planning Division
New England Division
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, Massachusetts 02254-9149

RE: Base Realignments and Closure
Fort Devens Realignment
Ayer, MA

Dear Ms. Brown:

Thank you for sending us a copy of your outline for the Environmental Impact Statement (EIS) which will be used to assess the impacts associated with the transfer of the U.S. Army Intelligence School from Fort Devens, MA to Fort Huachuca, AZ; and the consolidation of the Information Systems Command (ISC) at Fort Devens from Fort Huachuca, Arizona [EPA Region 9], Fort Belvoir, Virginia [EPA Region 3], and Fort Monmouth, New Jersey [EPA Region 2]. The information provided in your outline and discussed at the June 8, 1989 EIS scoping meeting, indicates that those concerns within EPA's jurisdiction and expertise (water quality, air quality, wetlands, drinking water, and noise) will be addressed in the EIS. We request that you keep us informed of the document's progress and meet with us once draft environmental sections of the document are prepared.

This office, the Office of Government Relations and Environmental Review, is the lead EPA contact point for all EIS-related matters concerning the Fort Devens Realignment. We will coordinate the EIS reviews with the other affected EPA Regions (2, 3, and 9) and provide you with a unified EPA position. All information and requests for EPA reviews of preliminary environmental documents should be submitted to me or Donald Cooke at the following address: Office of Government Relations and Environmental Review, RGR-2203, JFK Federal Building, Boston, Massachusetts 02203. I can be reached by telephone at (617) 565-3414. Also for your information, the EPA Region I Federal Facilities Coordinator is Ms. Anne Fenn and her telephone number is (617) 565-3927.

- Page 2 -

We look forward to participating in the NEPA process for the base realignment and hope that this letter assists you for purposes of future coordination with EPA. Please contact me or Donald Cooke of this office if you have any questions. Mr. Cooke may be reached by telephone at (617) 565-3414 or 565-3416.

Sincerely,

Elizabeth Higgins

Elizabeth Higgins, Esq., Assistant Director
for Environmental Review
Office of Government Relations and
Environmental Review (RGR-2203)

cc: Anne Fenn, EPA, PPA-2311
Environmental Review Coordinators, EPA Regions 2, 3, and 9



United States Department of the Interior

FISH AND WILDLIFE SERVICE
400 RALPH PILL MARKETPLACE
22 BRIDGE STREET
CONCORD, NEW HAMPSHIRE 03301-4901

REF: ER 89/411, 89/413

Mr. James B. Hildreth, Assistant Chief
Planning Division
U.S. Army Corps of Engineers
PO Box 2288
Mobile, Alabama 36628-0001

June 9, 1989

Dear Sir:

Your Notice in the May 8, 1989 issue of the Federal Register (Vol. 54, No. 87) advised of the intent to prepare Environmental Impact Statements on the Army's base realignment and closure actions for several installations including the Army Material Technology Lab and Fort Devens in Massachusetts. This office's review is confined to those projects in the New England States.

The limited information in the notice does not enable us to determine if there may be some possible concern, or interest, with the proposed actions. Any DEIS should address, if appropriate, those direct and indirect impacts to any extensive, undeveloped portions of the base essentially in the natural state that could be committed as the result of any proposed action. Some background information concerning this may be available as a result of past coordination and activities under the Sikes Act.

We do request that this office be kept further informed on the NEPA process for these two installations.

Sincerely yours,

Gordon E. Beckett
Supervisor
New England Area



Commonwealth of Massachusetts
Executive Office of Environmental Affairs
Department of Environmental Management

June 9, 1989

PO Box R
Carlisle
Massachusetts
01741
(617) 369-3350

Division of
Forests & Parks
Region 2

Mr. Joseph Ignazio
Chief, Planning Division
Department of the Army
New England Division, Corps of Engineers
424 Trapelo Road
Waltham, MA 02254-9149

Dear Mr. Ignazio:

Your May 30, 1989 letter to Commissioner James Gutensohn concerning your Environmental Impact Statement Scoping Meeting has been referred to this office for review.

Thank you for inviting us to this session. We do not feel that your proposed changes at the Base will have any significant impact on our Forests & Parks in the area. At this time, the Department of Environmental Management has no suggestions for your E.I.S.

Good luck with your report.

Sincerely,

A handwritten signature in black ink, appearing to read "Don Stoddard".

Don S. Stoddard
Regional Supervisor

DSS/vs



AYER PUBLIC SCHOOLS

SUPERINTENDENT'S OFFICE
WASHINGTON STREET
AYER, MASSACHUSETTS 01432
(508) 772-3468

R. NEVILLE MARKHAM, SUPERINTENDENT
JACK BERBERIAN, ASSISTANT SUPERINTENDENT

November 21, 1989

Mr. Edward O'Leary
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254-9149

Dear Mr. O'Leary:

Earlier in the school year, you, Jack Berberian, Assistant Superintendent, and I, met and discussed the proposed military changes for Fort Devens under the Base Closures and Realignment Act

You indicated to us that from the preliminary information developed by your staff there would be a reduction of 2000 military personnel and an increase of 1000 civilians. You stated, further, that there would be an estimated reduction of 300 - 400 students and a corresponding estimated loss of one million dollars in Impact Aid Funds.

The loss of approximately 300 - 400 children would result in an estimated reduction in our teaching staff of 12 - 15 staff members. In all likelihood most of these staff members would be at the elementary level. Further, there would be a reduction in both educational and building supply expenditures.

Since we met, it is our belief that even though the number of military personnel at Fort Devens would be reduced, the family units located at Fort Devens would continue to be filled.

In addition, the major change we anticipate is in the grade configurations. It is our contention that because of the type of organization that the Systems Information Command is there would be fewer children in the lower grades and more in the middle and upper grades. Therefore, we anticipate no significant total increase or decrease in Fort Devens student enrollment, only a change in grade configuration.

Special Education is one area of concern that we shared with you. It is not only difficult but, also, costly to provide a myriad of individual education plans. We feel that it would be of great assistance to this office if you could provide some accurate information on the number and types of handicapped students that would be involved in this transfer.



AYER PUBLIC SCHOOLS

SUPERINTENDENT'S OFFICE
WASHINGTON STREET
AYER, MASSACHUSETTS 01432
(508) 772-3468

R. NEVILLE MARKHAM, SUPERINTENDENT
JACK BERBERIAN, ASSISTANT SUPERINTENDENT

If you have any further questions please feel free to contact me.

Thank you very much for your assistance.

Very truly yours,


R. Neville Markham
Superintendent of Schools

RNM/cef



United States Department of the Interior

FISH AND WILDLIFE SERVICE
400 RALPH PILL MARKETPLACE
22 BRIDGE STREET
CONCORD, NEW HAMPSHIRE 03301-4901

Mr. Joseph L. Ignazio, Chief
Planning Division
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, Massachusetts 02254

October 6, 1989

ATTN: Impact Analysis Branch

Dear Mr. Ignazio:

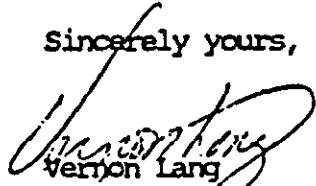
This responds to your letter dated September 26, 1989, for information on the presence of Federally listed and proposed endangered or threatened species in accordance with your preparation of an Environmental Impact Statement for the proposed realignment of installation activities at Fort Devens in Ayer, Massachusetts.

No Federally listed or proposed threatened and endangered species under our jurisdiction are known to occur in the project area. Therefore, no Biological Assessment or further consultation is required with us under Section 7 of the Endangered Species Act. However, you may wish to contact Jay Copeland of the Massachusetts Natural Heritage Program, 100 Cambridge Street, Boston, Massachusetts 02202, at 617-727-9194, for information on state listed species. Should project plans change, or additional information on Federally listed or proposed species becomes available, this determination may be reconsidered.

Regarding the proposed realignment of Jackson Road, one alternative is being considered which would pass through 1.6 acres of palustrine wetland. As you are aware, any proposal to discharge fill material into wetlands must be evaluated within the context of the Section 404(b)(1) Guidelines. The Guidelines carry a clear presumption that practicable alternatives exist for proposals to fill wetlands for non-water dependent uses, such as road construction. The National Environmental Policy Act, (NEPA) regulations also require consideration of project alternatives. We will provide additional comments on the project during our review of any applicable Section 404 compliance determinations or NEPA planning documents.

A list of Federally designated endangered and threatened species in Massachusetts is inclosed for your information. Thank you for your cooperation and please contact this office at 603-225-1411 if we can be of further assistance.

Sincerely yours,


Vernon Lang
Acting Supervisor
New England Area

Inclosure

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES
IN MASSACHUSETTS

Common Name	Scientific Name	Status	Distribution
FISHES:			
Sturgeon, shortnose*	<u>Acipenser brevirostrum</u>	E	Connecticut River & Atlantic Coastal Waters
REPTILES:			
Turtle, green*	<u>Chelonia mydas</u>	T	Oceanic straggler in Southern New England
Turtle, hawksbill*	<u>Eretmochelys imbricata</u>	E	Oceanic straggler in Southern New England
Turtle, leatherback*	<u>Dermochelys coriacea</u>	E	Oceanic summer resident
Turtle, loggerhead*	<u>Caretta caretta</u>	T	Oceanic summer resident
Turtle, Atlantic ridley*	<u>Lepidochelys kempi</u>	E	Oceanic summer resident
Turtle, Plymouth red- bellied	<u>Chrysemys rubriventris bangsi</u>	E	Plymouth & Dukes Counties
BIRDS:			
Eagle, bald	<u>Haliaeetus leucocephalus</u>	E	Entire state
Falcon, American peregrine	<u>Falco peregrinus anatum</u>	E	Entire state-reestablish- ment to former breeding range in progress
Falcon, Arctic peregrine	<u>Falco peregrinus tundrius</u>	E	Entire state migratory-no nesting
Plover, Piping	<u>Charadrius melodus</u>	T	Atlantic coast
Roseate Tern	<u>Sterna dougallii dougallii</u>	E	Atlantic Coast
MAMMALS:			
Cougar, eastern	<u>Felis concolor cougar</u>	E	Entire state-may be extinct
Whale, blue*	<u>Balaenoptera musculus</u>	E	Oceanic
Whale, finback*	<u>Balaenoptera physalus</u>	E	Oceanic
Whale, humpback*	<u>Megaptera novaeangliae</u>	E	Oceanic
Whale, right*	<u>Eubalaena</u> spp. (all species)	E	Oceanic
Whale, sei*	<u>Balaenoptera borealis</u>	E	Oceanic
Whale, sperm*	<u>Physeter catodon</u>	E	Oceanic
MOLLUSKS: NONE			
PLANTS:			
Small Whorled Pogonia	<u>Isotria medeoloides</u>	E	Hampshire, Essex Hampden, Worcester Middlesex Counties
Gerardia, Sandplain	<u>Agalinus acuta</u>	E	Barnstable County

* Except for sea turtle nesting habitat, principal responsibility for these species is vested with the National Marine Fisheries Service

Rev. 1/20/89



Massachusetts
Natural Heritage
Program

12 October 1989

Joseph L. Ignazio
Chief, Planning Division
Department of the Navy
New England Division, Corps of Engineers
424 Trapelo Road
Waltham, MA 02254-9149

Re: Fort Devens Construction
Ayer

Dear Sir or Madam:

Thank you for contacting the Natural Heritage and Endangered Species Program regarding rare species and ecologically significant natural communities in the vicinity of the project referenced above.

At this time, we are not aware of any rare plants or animals or ecologically significant natural communities that would be affected by the proposed project.

If your project plans change, or if additional fieldwork and research results in an update of our database, this evaluation may require reconsideration.

Sincerely,

Jay Copeland
Environmental Reviewer

JC/jc

cc: town file, chrono file



AYER PUBLIC SCHOOLS

SUPERINTENDENT'S OFFICE
WASHINGTON STREET
AYER, MASSACHUSETTS 01432
(508) 772-3468

R. NEVILLE MARKHAM, SUPERINTENDENT
JACK BERBERIAN, ASSISTANT SUPERINTENDENT

Decembert 13, 1989

Mr. Edward O'Leary
U.S.Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254-9149

Dear Mr. O'Leary:


On November 21, 1989 I forwarded to you the Ayer Public School's Impact Statement concerning the base realignment at Fort Devens.

Since that time, in response to a federal Department of Education survey concerning space needs of schools located on federal property, I have prepared the enclosed statement.

I felt that this statement, of December 13, 1989, might be of further assistance to you.

If you have any questions please call me.

Very truly yours,


R. Neville Markham
Superintendent of Schools

RNM/cef



AYER PUBLIC SCHOOLS

SUPERINTENDENT'S OFFICE
WASHINGTON STREET
AYER, MASSACHUSETTS 01432
(508) 772-3468

R. NEVILLE MARKHAM, SUPERINTENDENT
JACK BERBERIAN, ASSISTANT SUPERINTENDENT

The Information Systems Command, (I.S.C.) will be transferred to Fort Devens from Fort Huachuca, Arizona. The Military Intelligence School will be transferred from Fort Devens to Fort Huachuca, Arizona. This change, when completed, will result in approximately 1,000 fewer military personnel and an increase of 2,000 civilian employees at Fort Devens.

It is my assumption that these moves will not result in fewer military children in our district because existing housing units located on Fort Devens will continue to be occupied. Further it is expected that many of the civilian employees currently working for I.S.C., in Arizona, will elect not to transfer to Fort Devens. It is anticipated that once the transfer is completed most of the civilian employees will reside in other central Massachusetts communities and commute to work at Fort Devens.

Based on the above assumption and provided there is no important increase in housing units either on Fort Devens or the town of Ayer there should not be any substantial change in the total number of children, either military dependent or local, in our school district. The existing facilities should be able to house all Fort Devens and town of Ayer students' regular education programs.

There is, however, one space need that is unpredictable, Special Education. The Special Education population, both military and civilian, is increasing. If the trend continues there would be a need, at the elementary level, for additional space to house this increased population. There is the possibility, and this lends to the unpredictability of the situation, that the base realignment will result in a reduced number of special education children. If this is the case the special education space needs would be lessened at least for the near future.

This military change, further, will result in a change in grade configuration. It is anticipated that though the district will have the same approximate total number of students, there will be fewer students in the lower elementary grades but more in the middle and upper grades.

The major changes and transfers will probably occur over a two school year period from September 1993 through June 1995. During this period the school district will have to adjust to short term space problems as new I.S.C. personnel and their dependents arrive before M.I.S. personnel and their dependents depart. The school district has the experience and the ability to manage this situation.



January 22, 1990

Joseph L. Ignazio
Chief, Planning Division
Impact Analysis Branch
Department of the Army
New England Division, Corps of Engineers
424 Trapelo Road
Waltham, MA 02254-9149

RE: Base Realignment and Closure Activities (BRACO) at Fort Devens, Ayer, MA

Dear Mr. Ignazio:

Staff of the Massachusetts Historical Commission have reviewed the information you submitted, received December 22, 1989, regarding the proposed BRACO actions at Fort Devens. Work is proposed within and near the Fort Devens 1930s Cantonment Area, a historic district which appears to be eligible for inclusion in the National Register of Historic Places. After a review of this information, MHC staff have the following comments.

The following projects are unlikely to affect significant historic or archaeological resources: interior modifications to administrative supply buildings 647, 648, 651, and 655, and additions and interior renovations to buildings P-3412, P-3413, and 2602.

The following proposed road realignment and upgrading projects, which are located within or adjacent to the Fort Devens Historic District, will have no effect on the significant architectural and historical characteristics of the district:

- Sherman Avenue and MacArthur Avenue
- Pine Street and Sherman Avenue
- Pine Street and MacArthur Avenue
- Sherman Avenue and Antietam Street
- MacArthur Avenue and Dakota Street
- Dakota Street and Queenstown Street
- Sherman Avenue and Givry Street
- Dakota Street, Barnum Road, Patton Road, and Saratoga Street
- Queenstown Street and New Hospital Road
- Givry Street and Queenstown Street
- Jackson Road and Givry Street
- Patton Road and Queenstown Street

Massachusetts Historical Commission, Valerie A. Talmage, *Executive Director, State Historic Preservation Officer*
80 Boylston Street, Boston, Massachusetts 02116 (617) 727-8470

Office of the Secretary of ~~Commonwealth~~ Michael J. Connolly, *Secretary*
B-24

The proposed construction of two new buildings in the 2600 Area of Fort Devens will result in the demolition of approximately 21 World War II wooden temporary barracks. The barracks have been determined ineligible for listing on the National Register of Historic Places due to alterations that have compromised their architectural integrity. The proposed demolitions will have no effect on the Fort Devens Historic District.

MHC staff understand that plans for some of the proposed BRACO activities have not yet been finalized. MHC staff request additional information, as it becomes available, on the following proposed projects to determine what effects they may have on the Fort Devens Historic District or significant archaeological resources:

- exterior modifications to buildings P-12 and P-13 (plans and elevations)
- Verbeck Gate alterations (plans and elevations)
- Jackson Road relocation (plans)

Thank you for the opportunity to provide preliminary comments on the proposed BRACO activities. MHC staff look forward to reviewing the DEIR. If you have any questions please contact Allen Johnson of this office.

These comments are offered to assist in compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (36 CFR 800).

Sincerely,

for Bina Simon DSHPO
Valerie A. Talmage
State Historic Preservation Officer
Executive Director
Massachusetts Historical Commission

VAT/aj

cc: Advisory Council on Historic Preservation



AYER PUBLIC SCHOOLS

SUPERINTENDENT'S OFFICE
WASHINGTON STREET
AYER, MASSACHUSETTS 01432
(508) 772-3468

R. NEVILLE MARKHAM, SUPERINTENDENT
JACK BERBERIAN, ASSISTANT SUPERINTENDENT

January 23, 1990

Colonel Michael J. Goodman
Information Systems Command
Base Realignment Office
Fort Devens, MA 01433-5000


Dear Colonel Goodman:

I want to thank you for calling me, on January 2, and informing me of the correction in the dates, from September 1993 through June 1995 to September 1992 through June 1994, for the major changes and transfers to occur at Fort Devens.

For your information I am enclosing the correspondence that I have had with Mr. Edward O'Leary, of the U. S. Army Corps of Engineers of Waltham, MA and Mr. Charles E. Hansen, Acting Director of the Impact Aid Program, U. S. Department of Education in Washington, D.C. The original statement to Mr. Hansen is enclosed in the letter to Mr. Edward O'Leary dated December 13, 1989.

If you have any questions please call me.

Very truly yours,


R. Neville Markham
Superintendent of Schools

RNN/cef

Enclosures



AYER PUBLIC SCHOOLS

SUPERINTENDENT'S OFFICE
WASHINGTON STREET
AYER, MASSACHUSETTS 01432
(508) 772-3468

R. NEVILLE MARKHAM, SUPERINTENDENT
JACK BERBERIAN, ASSISTANT SUPERINTENDENT

January 9, 1990

Mr. Edward O'Leary
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254-9149

Dear Mr. O'Leary:

Reference: December 13, 1989 letter and Impact Statement
Please see copy enclosed.

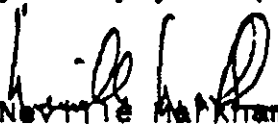
I would like to make a correction in the Impact Statement that was an enclosure to the December 13, 1989 letter I forwarded to you.

In the last paragraph of my statement I made note of when the major changes and transfers would occur. These dates should be changed from September 1993 through June 1995 to September 1992 through June 1994. It would be during this two school year period that the school district would have to adjust to short term space and program problems.

On January 2, 1990, Colonel Michael J. Goodman, Command Representative, United States Army Information Systems Command, Base Realignment Office at Fort Devens, informed me that the Information Systems Command main body would be transferring into Fort Devens during the June-July 1992 time period. Further, the Intelligence School, located at Fort Devens, would be transferring out during the 1993-1994 time period.

If you have any questions please call me.

Very truly yours,


R. Neville Markham
Superintendent of Schools

RNM/csf

B-27

2



UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
ECOLOGICAL SERVICES
3616 W. Thomas, Suite 6
Phoenix, Arizona 85019

March 15, 1990

Colonel Charles S. Thomas
Corps of Engineers
Los Angeles District
P. O. Box 2711
Los Angeles, California 90053-2325

Dear Colonel Thomas:

The Fish and Wildlife Service has reviewed the draft environmental impact statement (DEIS) for the Ft. Huachuca, Ft. Devens and Ft Monmouth Base Realignment and offer the following comments concerning effects of the proposed action on Sanborn's long-nosed bat (Leptonycteris sanborni), an endangered species.

The proposed action will create new missions at Ft. Huachuca with the need for new facilities and changing land uses. While none of these will be located in prime Sanborn's bat habitat, thereby reducing direct impacts, we expect the new facilities may result in significant indirect impacts.

As described in the DEIS, Ft. Huachuca is very involved with both operations and training programs. Suitable lands to utilize for these programs is limited by a variety of factors. Placement of new facilities will necessitate adjustments in existing land use (both location and duration parameters) that could impact Sanborn's bat habitat.

We believe the DEIS for this project should explore all indirect impacts on Sanborn's bat. It may not be sufficient to keep base activities out of habitat areas only when bats are present. More stringent protection may be needed. Depending on the outcome of impact analysis, Section 7 consultation as required by the Endangered Species Act may be required.

Thank you for the opportunity to comment on this DEIS. If we may be of assistance in project planning, please contact Ms. Lesley Fitzpatrick or me (Telephone: 602/379-4720; FTS 261-4720).

Sincerely,

Gilbert D. Metz
Acting Field Supervisor

cc: Regional Director, U.S. Fish and Wildlife Service, Albuquerque,
New Mexico (FWE/HC)



United States Department of the Interior

FISH AND WILDLIFE SERVICE
400 RALPH PILL MARKETPLACE
22 BRIDGE STREET
CONCORD, NEW HAMPSHIRE 03301-4901

Colonel Daniel M. Wilson
Division Engineer
U.S. Army Corps of Engineers, NED
424 Trapelo Rd.
Waltham, MA 02254-919

March 14, 1990

Attn: CENED-PL-I, Ms. Susan Brown

Dear Colonel Wilson:

We have reviewed the draft environmental impact statement (DEIS) for the Ft. Huachuca, Ft. Devens, Ft. Monmouth base realignment.

The DEIS adequately addresses impacts to fish and wildlife resources for the Ft. Devens segment of the proposal.

Sincerely yours,

A handwritten signature in cursive script, reading "Gordon E. Beckett", is written over the typed name.

Gordon E. Beckett
Supervisor
New England Field Office



UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
ECOLOGICAL SERVICES
3616 W. Thomas, Suite 6
Phoenix, Arizona 85019

May 23, 1990

Colonel Charles S. Thomas
U. S. Army Corps of Engineers
Los Angeles District
P. O. Box 2711
Los Angeles, California 90053-2325

Dear Colonel Thomas:

On May 22, 1990, a meeting was held between the Fish and Wildlife Service (FWS) and the U.S. Army concerning the Base Realignment project concerning Ft. Devens and Ft. Huachuca and potential effects to the endangered Sanborn's long-nosed bat (Leptonycteris sanborni). The FWS had raised some concerns regarding impacts to this endangered bat from both new and continuing operations on Ft. Huachuca. Much of the current operation of Ft. Huachuca is not in compliance with the Endangered Species Act.

Upon review of information presented during the meeting of May 22 and the commitments voiced by U.S. Army personnel in attendance and Colonel Jack B. Avant's letter to the FWS dated May 21, 1990, we concur with your finding of no effect on Sanborn's long-nosed bat from the Base Realignment project.

As discussed during the meeting, there are many areas of operations on Ft. Huachuca that are not in compliance. The new post command is aware of this situation and has committed to correct the situation and establish a long term management program for Ft. Huachuca under the Integrated Training Area Management Plan program. This plan, when developed, may require Section 7 consultation as will all operations on Ft. Huachuca that potentially effect Sanborn's long-nosed bat or its habitat.

This concurrence with the U.S. Army finding of no effect is valid as long as the commitments agreed to by the U.S. Army are implemented in a timely fashion and the construction and training programs discussed on May 22 do not undergo significant changes.

We look forward to working with the U.S. Army on the management of Ft. Huachuca and appreciate the Army's time and cooperative commitment that was expressed during the May 22, 1990 meeting. If we may be of further assistance, please contact Ms. Lesley Fitzpatrick or me (Telephone: 602/379-4720).

Sincerely,

A handwritten signature in cursive script that reads "Sam F. Spiller".

Sam F. Spiller
Field Supervisor

cc: Regional Director, Fish and Wildlife Service, Albuquerque, New Mexico
(FWE/HC)
Director, Arizona Game and Fish Department, Phoenix, Arizona



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION I

J.F. KENNEDY FEDERAL BUILDING, BOSTON, MASSACHUSETTS 02203-2211

April 11, 1990

Mr. Jonathan Freedman
U.S. Army Corps of Engineers
Los Angeles District
ATTN: CESPL-PD-RQ
P.O. Box 2711
Los Angeles, CA 90053-2325

RE: D-USA-B11010-00

Dear Mr. Freedman:

In accordance with Section 309 of the Clean Air Act (CAA) and the National Environmental Policy Act (NEPA), we have reviewed the U.S. Army Corps of Engineers' Draft Environmental Impact Statement (EIS) for the Fort Huachuca, Fort Devens and Fort Monmouth Base Realignment.

As discussed in our July 11, 1989 letter to the New England Division of the U.S. Army Corps of Engineers, this office is the lead EPA Region for purposes of providing comments on this EIS. After coordination with other affected EPA Regions (EPA Region 2 - Fort Monmouth, New Jersey, and EPA Region 9 - Fort Huachuca, Arizona) we have the following recommendations based on our review of the Draft EIS:

- In view of the fact that Fort Devens was included on the Superfund National Priority List - Federal Facility Sites on February 21, 1990, we recommend additional coordination with EPA's Region One Superfund Office concerning the proposed Fort Devens' activities relative to consistency with the "1989 Installation Restoration Program Plan for Fort Devens" and compliance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 ("CERCLA") as amended by the Superfund Amendments and Reauthorization Act of 1986 ("SARA");

- We recommend that the Army coordinate with EPA Regional Offices during site specific realignment moves and construction/renovation activities to avoid potential impacts to hazardous waste cleanups, hazardous waste management, wetlands and sensitive/unique resources;

- Asbestos removal and disposal schemes should comply with the National Emission Standards for Hazardous Air Pollutants: Asbestos Standard (NESHAP) [found at 40 CFR Part 61 Subpart M]; and

- Removal of underground storage tanks at Fort Devens and Fort Monmouth should be conducted in an environmentally sound manner.

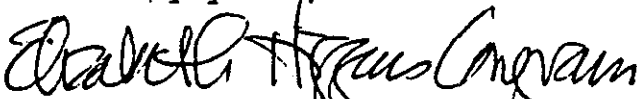
- Finally, we believe that the Final EIS and ultimately the Record of Decision (ROD) should identify the Army's commitments to conduct additional studies and mitigation measures which are identified in the Draft EIS.

We also encourage the Army to consider realignment alternatives which will maximize and preserve the long-range environmental benefits of their Fort Huachuca holdings. For instance, the Army should consider agreements with resource agencies (e.g., U.S. Fish and Wildlife Service, and State Fish and Game Departments) in order to provide for management and protection of sensitive and especially valuable habitat and natural resources. If this cannot be accomplished, EPA suggests that protection and preservation of existing wetland and riparian resources and other valuable habitat be stipulated as a condition of the realignment.

Based on our review of the Draft EIS, the supporting documents for the individual Bases, and in accordance with our national EIS rating criteria, a copy of which is enclosed, we have rated this Draft EIS EC-2 (Environmental Concerns -- Insufficient Information).

Thank you for the opportunity to review the Draft EIS. Should you have any questions regarding our comments, please contact me at (617) 565-3414 [FTS 835-3414] or have your staff contact Donald Cooke of this office at (617) 565-3426 [FTS 835-3426]. We would appreciate your sending four (4) copies of the Final EIS and their support documents to each of the affected EPA Regions (addresses attached).

Sincerely yours,



Elizabeth Higgins Congram, Assistant Director
for Environmental Review
Office of Government Relations
& Environmental Review (RGR-2203)

Enclosures

cc: Colonel Daniel Wilson, Division Engineer, COE NED
Lt. Col. Stan Murphy, Deputy Division Engineer, COE NED
Sue Brown, COE NED, Impact Analysis Branch
Robert Hargrove, EPA Region 2
Deanna Weiman, EPA Region 9
Fort Huachuca, Base Commander
Fort Devens, Base Commander
Fort Monmouth, Base Commander

Requested EPA Regional Offices to receive four (4) copies of the Fort Huachuca, Fort Devens and Fort Monmouth Base Realignment Final EIS and their support documents.

Final EIS and copies of the Fort Huachuca, Fort Devens and Fort Monmouth Support Documents.

Ms. Elizabeth Higgins Congram
Assistant Director for Environmental Review
Office of Government Relations and Environmental Review
U.S. Environmental Protection Agency - Region 1
John F. Kennedy Federal Building
Boston, MA 02203

Final EIS and copies of the Fort Monmouth Support Document.

Mr. Robert W. Hargrove, Chief
Federal Activities Section,
Environmental Impact Branch
U.S. Environmental Protection Agency - Region 2
26 Federal Plaza
New York City, New York 10278

Final EIS and copies of the Fort Huachuca Support Document.

Deanna Weiman, Director
Office of External Affairs
U.S. Environmental Protection Agency - Region 9
1235 Mission Street
San Francisco, CA 94103

EPA Technical Comments
Draft EIS - Base Realignment
Ft. Huachuca, Ft. Devens, Ft. Monmouth

Proposed Activities

In accordance with the Secretary of Defense's Base Realignment and Closure Commission and the Base Closure and Realignment Act, the Army Information Systems Command will be consolidated at Fort Devens, Massachusetts and the Army Intelligence Center and School will be consolidated at Fort Huachuca, Arizona. Fort Devens' Intelligence School will join Headquarters, U.S. Army Intelligence Center and School currently located at Fort Huachuca. The Information Systems Command will be relocated at Fort Devens with elements of the Information Systems Command being transferred from Fort Huachuca, Arizona; Fort Monmouth, New Jersey; and Fort Belvoir, Virginia. We understand that the impacts associated with realignment activities at Fort Belvoir will be addressed in a separate Environmental Impact Statement.

Realignment activities at Fort Huachuca will result in a net gain of 774 positions (including 310 military positions), a gain of 1,674 military students, and a loss of 1,210 civilian positions. The proposed realignment action at Fort Huachuca will utilize approximately 800,000 sf of undeveloped land for new structures, with an additional 81,667 sf for the SIGINT/EW Tactical Training Area, 650,000 sf for the relocated parade field, and approximately 1,500,000 sf for the outdoor sports complex, utilities/roads upgrade will also require additional undeveloped land.

Fort Devens would gain 1,475 civilian positions from Fort Huachuca, 347 from Fort Belvoir, and 309 from Fort Monmouth for a total inflow of 2,131 positions from Information Systems Command. All 1,674 military students currently at Fort Devens' Intelligence School will leave, and 1,095 military personnel will transfer out of Fort Devens. The net migration of civilian jobs to the Fort Devens area will be 1,813 and 930 military personnel will transfer into Fort Devens. Floor space being vacated by Army Intelligence School at Fort Devens would be renovated for office space of the Information Systems Command. The proposed realignment will require the construction of the Information Systems Facility Building (54,000 sf of office space), an addition to Building P-2602 and Building P-3413 (95,000 sf addition), renovation of several buildings, demolition of approximately 21 existing World War II era buildings and appurtenant structures, and upgrading of three intersections to accommodate increased traffic loads.

Military personnel residing on the Base at Fort Monmouth is expected to decrease by 74. No new construction is required at Fort Monmouth. Space in Squier Hall to be vacated by the Information Systems Management Activities will allow other Fort Monmouth tenants to move in. Once these new tenants vacate their old space (existing World War II era buildings), the old buildings will be demolished.

NPL Site

The Draft EIS states on page 63 that "In July 1989, Fort Devens and the Sudbury Training Annex were proposed for listing on the EPA National Priorities [sic.] List (NPL) for hazardous waste sites. Forty-six potential hazardous waste sites were recorded. These sites include the explosive ordinance disposal range, a sanitary landfill, and a building used to store battery acids, PCBs (polychlorinated biphenyls), pesticides, and solvents". As you are now aware, on February 21, 1990, Fort Devens and the Sudbury Training Annex were placed on the National Priority List - New Federal Facility Sites.

As you know, the entire Fort Devens is included on the National Priority List with the base perimeter defining the NPL site boundaries. As discussed in a telephone conversation and meeting between EPA staff and members of the New England Division of the Corps, close coordination during design of the new facilities and construction activities is required to assure compliance with CERCLA as amended by SARA. However, based on information contained in the Draft EIS and the Fort Devens Support Document we do not foresee any of the proposed realignment activities at Fort Devens as interfering with the contaminated portions of the Base. In addition, we understand that the proposed realignment activities at Fort Devens will be consistent with the "1989 Installation Restoration Program Plan for Fort Devens" prepared by the U.S. Army Toxic and Hazardous Materials Agency (USATHMA).

Table S-2 Compliance With Environmental Statues, page S-4 of the Draft EIS, should list the Resource Conservation and Recovery Act (RCRA), as well as the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 ("CERCLA") as amended by the Superfund Amendments and Reauthorization Act of 1986 ("SARA").

Coordination During Site Specific Realignment Activities

EPA is concerned that the proposed realignment activities may effect on-going hazardous waste management and hazardous waste cleanup programs at Fort Huachuca. In our opinion, the Final EIS should describe in greater detail the consistency of realignment activities with Fort Huachuca's current hazardous waste management and cleanup programs. We also recommend that the Final EIS discuss potential impacts to Base environmental staffing, funding, and compliance schedules. Realignment activities at Fort Huachuca must not be allowed to affect the proper management of hazardous waste or correction of violations. Finally, we recommend close coordination Base environmental staff, EPA, the Arizona Department of Environmental Quality, and those responsible for realignment and construction activities.

Asbestos

World War II era buildings containing asbestos will be demolished at Fort Devens and Fort Monmouth. According to the Fort Devens Support Document, Fort Devens has established an asbestos control program in compliance with Army, Occupational Safety and Health Administration (OSHA), EPA and Massachusetts Department of Environmental Protection regulations regarding the handling of asbestos. The Fort Monmouth Support Document states that asbestos removal on Base is handled on a case by case basis depending on type. While the Draft EIS contains an acknowledgement of "Federal and State regulations" regarding asbestos, we believe it is more appropriate to cite EPA as the federal agency regulating the removal of asbestos from demolitions and renovations under the National Emission Standards for Hazardous Air Pollutants: Asbestos Standard (NESHAP), found at 40 CFR Part 61 Subpart M, as well as specific state and local regulations.

It is a requirement of the NESHAP Asbestos Standard that asbestos be removed from any building prior to demolition. The NESHAP Asbestos Standard also requires written notification to EPA before asbestos removal work starts. Written notice to state environmental or health agencies is often a requirement of state regulations. Work practices must be followed which are designed to eliminate emissions of asbestos to the ambient air, and the material must be disposed of at a properly operated landfill. According to the Draft EIS, Fort Monmouth currently has a contractor dispose of asbestos material off-site. The Draft EIS also states that Fort Devens currently disposes of asbestos material at the Fort Devens Landfill, but following closure of the Base landfill in 1991 a contractor will handle asbestos disposal. You should be aware that the NESHAP Asbestos Standard holds the owner of a facility and the operator of a facility responsible for compliance with the Standard. This means that proper disposal of asbestos is the responsibility of the Army not just the contractor. Finally, we recommend that Federal and State regulations pertaining to asbestos removal be attached to the demolition/renovation construction plans and specifications.

Underground Storage Tanks

According to the Draft EIS, construction activities at Fort Devens and Fort Monmouth will require the removal of underground storage tanks. At Fort Devens the 1,000 gallon underground storage tanks are at least twenty-five years old, constructed of steel, and were used for the storage of number two fuel oil. The Fort Devens Support Document states on page 2-25 that "... the underground storage tanks will be removed and handled according to RCRA Underground Storage Tank regulations (40 CFR Part 280)," with overview by Fort Devens' Environmental Management Office. We are pleased that the Army has committed to removing fuel oil storage tanks at Fort Devens in accordance with RCRA regulations. Under-

ground storage tank removal at Fort Devens is also regulated by the "Massachusetts State Regulations for Closure of Underground Fuel Oil Tanks" under 527 CMR 9.

We recommend that the Final EIS outline the tank removal process for Fort Devens and apply the same process for tank removal at Fort Monmouth. The removal plan should address the following questions:

- How the contents of the tanks will be removed and disposed of?
- What procedures will be used to test the tanks for leakage?
- If leakage exists what soil and groundwater investigations will be conducted?
- What parameters will soils (and possibly groundwater) be analyzed for?
- What method of soil testing (i.e. visual, field gas chromatography, etc) will be used following excavation of tanks?
- How sensitive will these methods be to detection of fuel and other stored liquids in surrounding soil?
- To what levels of contamination will soils and or contaminated groundwater be removed?
- Special back filling requirements, capping (cover design) or monitoring requirements if some level of soil contamination is left in place.

Additional Studies and Commitments to be Included in the Final EIS and Record of Decision (ROD)

We recommend that the Final EIS contain a list of all commitments for additional studies and mitigation measures identified in the Draft EIS. We also recommend that these studies and measures be made commitments in the Record of Decision (ROD).

- Measures to minimize the environmental effects at Fort Devens include survey and remediation efforts associated with potential asbestos problems in existing buildings and underground petroleum tank leakage (pg. 14).

- Construction activities and increased activity on the ranges could cause erosion impacts if heavy rains and summer thunder-showers occur (pg. 70). The Final EIS should include more information on the actual possibility of erosion and the consequences of this erosion. Although heavy rain is infrequent, erosion control measures should be implemented to ensure these impacts do not occur (pg. 70).

- Biological surveys of sensitive resources (pgs. 14 and 75, e.g., wetlands, riparian areas, unique vegetation) should be completed prior to the Final EIS. The results of these surveys should be included in the Final EIS with a discussion of potential activities in these areas and possible impacts.

- Cumulative impacts to sensitive habitats (e.g., freshwater marshes, unique vegetation), water quality, and wildlife from increased range use at Fort Huachuca should be discussed in the Final EIS. Address potential impacts from past, present, and reasonably foreseeable future projects.

- The Final EIS should describe the specific enforcement and regulatory measures which will be used to ensure effective implementation of air quality, erosion, water quality, and biological mitigation measures (Section 3.0 - Environmental Analysis and Mitigations, Supplemental Information for Ft. Huachuca Realignment).

- Regarding Fort Huachuca, to insure adequate supply and quality of water, close monitoring of the water table and chemical testing of the water should be conducted (pg. 70).

- Regarding Fort Huachuca, a detailed geological study would be required to determine design criteria for foundation and slope stability (pg. 71).

- The Final EIS should describe existing Fort Huachuca flood control facilities and the potential impact of increased impervious surfaces on these facilities (pg. 71). We urge the Army to commit to the Draft EIS recommendation that engineering of flood control facilities be designed into every construction project.

- Because of the sensitive and unique habitats of Garden, Huachuca, Sawmill, and Blacktail Canyons, we urge the Army to commit to avoidance of activity in these areas of Fort Huachuca (pg. 75). We recommend that management plans for these areas be developed and included in the Base Natural Resources Management Plan and Base Comprehensive Plan.

- Regarding Fort Huachuca, prior to initiation of use of any new area, directed biological surveys and habitat evaluations will be conducted for all listed or candidate species (pg. 77).

- Fort Huachuca is currently developing a management plan for the Sanborn's long-nosed bat (pg. 77). We recommend that the Army finalize and implement the endangered Sanborn's long-nosed bat management plan prior to increased use of the Fort Huachuca ranges. The Final EIS should describe the status of Section 7 Consultation with the U.S. Fish and Wildlife Service.

- Army should continue to have the USAEHA conduct environmental noise assessments and update noise contours at Fort Huachuca as required by Army regulations (AR 200-1), (pg. 94).

- Prior to demolition of the World War II buildings, they must be inspected for asbestos and any associated underground storage tanks should be inspected for leaks (pg. 97).

- A program of trash separation and recycling for Fort Huachuca should be encouraged to reduce waste materials disposed of at the landfill (pg. 99). Although the projected increase in solid waste is not expected to be great, the regional landfill has a projected lifespan of only four years (pg. 64). Therefore, even a slight increase in solid waste may be a significant impact.

SUMMARY OF RATING DEFINITIONS AND FOLLOW-UP ACTION

Environmental Impact of the Action

LO--Lack of Objections

The EPA review has not identified any potential impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC--Environmental Concerns

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

EO--Environmental Objections

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU--Environmentally Unsatisfactory

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

Adequacy of the Impact Statement

Category 1--Adequate

EPA believes that draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2--Insufficient Information

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3--Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.



MONTACHUSETT

REGIONAL PLANNING COMMISSION

Offices: R1427 Water St., Fitchburg, Massachusetts 014
(508) 345-7376 or 345-2216

March 30, 1990

Mr. John DeVillars, Secretary
Executive Office of Environmental Affairs
100 Cambridge Street - 20th Floor
Boston, MA 02202

RE: Draft Environmental Impact Statement on Fort Huachuca, Fort
Devens, Fort Monmouth Base Realignment

Dear Mr. DeVillars:

At the monthly meeting of the Montachusett Regional Planning Commission held on Tuesday, March 27, 1990, members discussed the Draft Environmental Impact Report for the planned base realignment activities at Ft. Huachuca, Arizona; Fort Devens, Massachusetts; and Fort Monmouth, New Jersey. The Commission voted to find the report in conformity with regional goals, policies, and objectives subject to abutting municipalities' approval.

Very truly yours,

Nathaniel Dexter

Nathaniel Dexter
Chairman, MRPC

ND/LM/km

cc: ✓ Susan Brown, Corps of Engineers



ARIZONA STATE PARKS

800 W. WASHINGTON
SUITE 415
PHOENIX, ARIZONA 85007
TELEPHONE 602-542-4174

ROSE MOFFORD
GOVERNOR

STATE PARKS BOARD MEMBERS

WILLIAM G. ROE
CHAIR
TUCSON

RONALD PIES
VICE CHAIR
TEMPE

DEAN M. FLAKE
SECRETARY
SNOWFLAKE

DUANE MILLER
SEDONA

ELIZABETH TEA
DUNCAN

JONI BOSH
PHOENIX

M. JEAN HASSELL
STATE LAND COMMISSIONER

KENNETH E. TRAVOUS
EXECUTIVE DIRECTOR

COURTLAND NELSON
DEPUTY DIRECTOR

March 26, 1990

Charles S. Thomas
District Engineer
U.S. Army Corps of Engineers
P.O. Box 2711
Los Angeles, CA 90053-2325

RE: Fort Huachuca, Proposed Base Realignment, DOD-Corps and DOD-Army

Dear Colonel Thomas:

Thank you for sending us the draft Environmental Impact Statement (EIS) for the Fort Huachuca, Ft. Devens, Ft. Monmouth Base Realignment. I have reviewed the draft EIS and its supplement and have the following comments pursuant to 36 CFR Part 800:

1. I note that Statistical Research has conducted a sample survey of approximately 15 percent of the base area of Fort Huachuca and that survey resulted in the location of 58 prehistoric sites as well as historic sites. The EIS also states that the base archaeologist, Marie Cottrell, surveyed most of the areas proposed for new construction as a result of the base realignment. I also note that the EIS recognizes that the historic district at Fort Huachuca is a National Historic Landmark.
2. The EIS also states that any additional areas where construction will be needed will be surveyed and that the Section 106 procedures will be complied with.
3. We have heard about the proposed base realignment activities at Fort Huachuca but have not been formally consulted pursuant to 36 CFR 800.4 or 800.5. In my opinion, the draft EIS does not constitute formal consultation for Section 106 purposes. In order to bring this project into compliance with Section 106, all areas of proposed impact should be surveyed (including all new construction and training areas) and we should be supplied with detailed information about proposed projects along with maps of proposed impact areas. In addition, we require copies of the archaeological survey reports and a request for consultation from the agency (or Fort Huachuca) based upon the submitted documentation.
4. The proposed base closure will probably also result in increased training activities at Fort Huachuca, some of which may be on-going and not clearly definable at this time. You may want to consider developing a Memorandum of Agreement (MOA) for proposed new construction and training activity areas at the Fort.

We look forward to hearing from either your office or directly from Fort Huachuca regarding Section 106 compliance for this project. If you have any questions, please contact me.

Sincerely,


Robert E. Gasser
Compliance Coordinator

for Shereen Lerner, Ph.D.
State Historic Preservation Officer

cc: Marie Cottrell, Fort Huachuca

B-43



STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION

LAWRENCE SCHMIDT
Director
Office of Program Coordination

CN 402
Trenton, NJ 08625-0402
(609) 292-2662
Fax (609) 292-0988

March 13, 1990

Mr. Jonathan Freedman
U.S. Army Corps of Engineers
Los Angeles District
ATTN: CESPL-PD-RQ
P.O. Box 2711
Los Angeles, CA 90053-2325

RE: Fort Monmouth Base Realignment
Draft Environmental Impact Statement (Feb 1990)

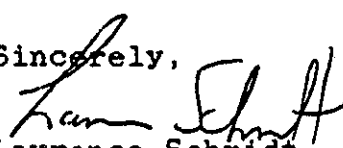
Dear Mr. Freedman:

The Office of Program Coordination of the New Jersey Department of Environmental Protection has completed its review of the above referenced document. The realignment activities discussed consist mainly of personnel relocation. Thus, any adverse environmental impacts associated with the realignment are expected to be minimal in nature and temporary in duration. These impacts have been adequately addressed in the Draft Environmental Impact Statement (DEIS).

Please note that the DEIS discussed possible construction impacts to Squire Hall, which is located within the proposed Fort Monmouth National Historic District (page 93, 4.4.3). Please revise this section to state that "Any plans for external modifications . . . will be coordinated with the New Jersey State Historic Preservation Officer (NJSHPO)."

Thank you for providing the Department with the opportunity to review this Draft Environmental Impact Statement.

Sincerely,


Lawrence Schmidt
Director
Office of Program Coordination

c. Nancy Zerbe, ONJH

B-44

DENNIS DeCONCINI
ARIZONA

COMMITTEES:
APPROPRIATIONS
JUDICIARY
VETERANS' AFFAIRS
INDIAN AFFAIRS
RES AND ADMINISTRATION
INTELLIGENCE

COMMISSION ON
SECURITY AND COOPERATION
IN EUROPE/CHAIRMAN

United States Senate

WASHINGTON, DC 20510

328 HART SENATE OFFICE BUILDING
WASHINGTON, DC 20510
(202) 224-4821

PHOENIX OFFICE:
333 WEST ROOSEVELT ST.-100
PHOENIX, AZ 85003
(602) 378-8788

SOUTHERN ARIZONA OFFICE:
2424 EAST BROADWAY
TUCSON, AZ 85718
(602) 670-4821

EAST VALLEY OFFICE:
40 NORTH CENTER STREET S-110
MESA, AZ 85211
(602) 278-4998

April 27, 1990

Mr. Jonathan Freedman
Army Corps of Engineers
300 North Los Angeles Street
Los Angeles, California 90053

Dear Mr. Freedman:

Enclosed please find a letter I sent to Secretary of Defense Richard Cheney regarding the proposed move of the Army's Information Command System (ICS) from Fort Huachuca, Arizona to Fort Devens, Massachusetts. I respectfully request that this letter be included for the record in the Environmental Impact Statement being conducted by the Corps of Engineers on the proposed move.

Sincerely,



DENNIS DeCONCINI
United States Senator

DDC/rs

DANIEL K. INOUYE, HAWAII
ERNEST F. HOLLINGS, SOUTH CAROLINA
J. BARNETT JOHNSTON, LOUISIANA
QUENTIN N. BURDICK, NORTH DAKOTA
PATRICK J. LEAHY, VERMONT
JIM SASSER, TENNESSEE
DENNIS DECONCINI, ARIZONA
DALE BUMPERS, ARKANSAS
FRANK R. LAUTENBERG, NEW JERSEY
TOM HARKIN, IOWA
BARBARA A. MIKULSKI, MARYLAND
HARRY REID, NEVADA
BROCK ADAMS, WASHINGTON
WYCHE FOWLER JR., GEORGIA
J. ROBERT KERREY, KANSAS

MARK O. HATFIELD, OREGON
TED STEVENS, ALASKA
JAMES A. MCCLURE, IDAHO
JAKE GARN, UTAH
THAD COCHRAN, MISSISSIPPI
ROBERT W. KAYTEN JR., WISCONSIN
ALFONSO M. D'AMATO, NEW YORK
WARREN RUDMAN, NEW HAMPSHIRE
ARLEN SPECTER, PENNSYLVANIA
PETE V. DOMENICI, NEW MEXICO
CHARLES E. GRASSLEY, IOWA
DON NICKLES, OKLAHOMA
PHIL GRAMM, TEXAS

United States Senate

COMMITTEE ON APPROPRIATIONS

WASHINGTON, DC 20510-8025

November 30, 1989

JAMES H. ENGLISH, STAFF DIRECTOR
J. KEITH KENNEDY, MINORITY STAFF DIRECTOR

The Honorable Richard B. Cheney
Secretary of Defense
The Pentagon
Washington, D.C. 20301

Dear Mr. Cheney:

I am writing because I continue to have great concern about the Defense Department's decision to move the Army's Information Systems Command (ISC) from Fort Huachuca, Arizona to Fort Devens, Massachusetts. I supported the Base Closings and Realignment Act passed by the Congress. I believe the Commission established to study the closing of bases did a good job considering the complexity of the issues and the time constraints. What I find troubling is the Defense Department's refusal to take a second look at the Fort Huachuca realignment to make sure that the recommended changes increase military efficiency and achieve the savings required under the law.

While it was politically expedient to require an all or nothing acceptance of the Commission's report, based on a narrow reading of the law, it is irresponsible to go forward with a specific move when the data apparently show that the result is just the opposite of the goal intended. In the debate on the base closings which took place on the Senate floor on September 28, 1989, the chairman of the Senate Armed Services Committee, Senator Nunn, stated: "Obviously, if significant errors were made, one would expect the Secretary of Defense to consider whether these realignments should proceed".

My staff has reviewed the data supplied to the Commission and used in their analysis. They cannot find any fiscal data to justify the movement of the Army's Information Systems Command (ISC) from Fort Huachuca. The only conclusion seems to be that the realignment of the ISC to Fort Devens was a move to keep Fort Devens from closing, and was not driven by the goal to increase efficiency or save money. In what follows I would like to point out some of the evidence which leads to this conclusion. I would appreciate your specific comments on this analysis.

The Commission first looked at the Intelligence school which was split between Fort Huachuca and Fort Devens. Consolidation of these schools made sense. Fort Huachuca was determined to be the best site because it was the larger activity and contained facilities which could not be duplicated at Fort Devens.

The Commission then had three options with respect to Fort Devens: (1) Close and transfer it to the National Guard, (2) close and place it in a Caretaker Status, or (3) close and sell it. The Army, however, was against closing Fort Devens because they felt it "plays a pivotal role in the Army's presence, Reserve Support, Reserve training and mobilization mission in New England". It introduced a fourth option to the Commission, namely to backfill the vacated spaces at Fort Devens by moving personnel from the Information Systems Command (ISC) from Fort Huachuca, Fort Belvoir, and Fort Monmouth, and suggesting that this option was "in the best interests of the Army". It dismissed the fact that ISC had no personnel at Fort Devens, that Fort Huachuca was the headquarters for the ISC, and that consolidation of the ISC at one of the other facilities, specifically Fort Huachuca, was more logical and cost effective. Apparently Fort Devens had to be saved.

One must also look at the Commission's analysis. To close and sell Fort Devens would cost \$76 million and could be paid back in 2 years. The realignment of the ISC to Fort Devens cost \$190 million and would take 11 years to pay back. According to the Commission's own evaluation, the payback is 11 years, far beyond the Commission's guideline of 6 years.

Had the Commission completed the evaluation and looked at consolidation at Fort Huachuca, I am convinced they would have found lower costs, increased savings, and a payback well within 6 years. Consider the following: ISC was spread over three major facilities, Fort Huachuca, Fort Belvoir and Fort Monmouth. Consolidation at one facility could be expected to improve efficiency and reduce overhead, overlapping functions, and base costs. The major cost in consolidating is clearly tied to the relocation of personnel. At the time of the Commission study, ISC authorized personnel ceilings at the three facilities were as follows: Fort Huachuca--1,072; Fort Belvoir--1,662; and Fort Monmouth--204. Consolidation at Fort Huachuca would involve the movement of 1,866 personnel to a low cost area. Relocation of all personnel to Fort Devens involves the movement of 3,838 personnel to a high cost area. (Personnel to be moved in both cases are over 70% civilians). I believe these facts speak for themselves in terms of upfront costs.

Mr. Secretary, I am not trying to impede implementation of the Commission's recommendations on base closings. I expect to support the appropriations which will be needed to continue the process over the next few years. What I am offering is an option which I believe will improve the basic plan and save additional resources. The argument you made before a number of us prior to the vote on the Senate floor on September 26 was that you must save money. You can close Fort Devens and get credit for a closing rather than a realignment and get a real payback in two years. You can then consolidate the Information Systems Command

at Fort Huachuca and save the expense of relocating 1,972 personnel, of which 1,233 are civilians. Savings can also be expected because of the vast cost of living differences between Arizona and the Northeast.

If, however, it is important to keep Fort Devens open because it is needed as a training site for the Army Reserves and National Guard (as suggested by the Army), you might consider this an ideal location for troops which are likely to be withdrawn from Europe in the near future.

The information cited above was obtained from worksheets that were released to my office by the Base Closure Commission staff. It is my understanding that they were used in the analysis by the Commission. I have attached five of the relevant data sheets for your information.

Again, Mr. Secretary, I support the efforts of the Department of Defense to close bases and realign others to save money. The effort is long overdue. Also, as you have already indicated, more bases will have to be closed and realigned in the next fiscal year. This time you will not have the luxury of a Commission and imposed deadlines to facilitate these closures. Let's try to avoid the mistakes which were made at a limited number of bases this past year.

Unfortunately, in the case of Fort Huachuca, I believe the Commission overlooked an option which could realize even greater savings than the recommended course. I am therefore asking that you take another look at this particular realignment. We owe it to the people of Arizona who are faced with the difficult task of uprooting their families and moving across country. We also owe it to the American public who expect us to make every effort to save tax dollars.

I look forward to your timely response to this proposal.

Sincerely,


DENNIS DeCONCINI
United States Senator

DDC/cw



Conservation Law Foundation of New England, Inc.

3 Joy Street
Boston, Massachusetts
02108-1497
(617) 742-2540

April 16, 1990

By Fax and Mail

Division Engineer
U.S. Army Corps of Engineers,
New England Division
(ATTN: CENED-PL-1, Ms. Susan Brown)
424 Trapelo Road
Waltham, Massachusetts 02254-9149

Re: Base Realignment of Installation Activities at Fort Devens,
Ayer, Massachusetts -- Draft Environmental Impact Statement

Dear Ms. Brown:

The Conservation Law Foundation of New England, Inc. ("CLF") submits the following comments on the draft environmental impact statement referred to above. CLF is a nonprofit membership organization dedicated to improving resource management, environmental quality and public health throughout the nation. Many of CLF's members reside in the towns surrounding Fort Devens, and others reside nearby or downstream along the Nashua River. We appreciate the opportunity to comment on the draft EIS, and thank you for allowing us to submit our comments today by fax.

We urge that the description of the affected environment and the range of alternative means of carrying out the proposed action be expanded in certain ways. Our concerns pertain to four issues: the wastewater treatment system, landfill, and hazardous waste sites at the base, and the increased traffic in the area around the base.

Wastewater Treatment

As the draft EIS points out, water quality problems in the Nashua River have abated to some extent in recent years but have not diminished to the point of insignificance. (Pages 26, 65.) It is not possible to tell from the draft whether the wastewater treatment plant at the base contributes to those problems. (Id.) The decrease in the population residing on the base as a result of the realignment, and the corresponding reduction in

wastewater flow, could reduce the effectiveness of the treatment plant, and, on the other hand, could provide an opportunity to reduce impacts by upgrading the treatment system.

We therefore request that the EIS provide the following additional information. First, it should provide a detailed summary of all NPDES permit violations at the plant during the past year, if any violations have occurred. It should also summarize any remedial measures that have been discussed with, or recommended or ordered by, federal or state regulatory agencies in connection with the violations. Second, the EIS should describe in greater detail all water quality violations that have been recorded in the vicinity of the treatment plant outfall, and describe what loadings from the treatment plant contribute to those violations, even if the plant has been operating within the relevant effluent limitations (for example, nitrate nitrogen or BOD) in its permit.

Third, the EIS should provide an estimate of the new daily flow to the treatment plant after the proposed action has been completed, and state whether the decrease in flow, if any, could affect the efficiency of the plant. Finally, if the plant has been violating its NPDES permit or contributing to violations of water quality standards, or if changes in flow due to realignment might cause it to do so, it is important for the EIS to examine alternative methods of wastewater treatment for the new population level at the base.

Landfill

In light of what seems to be a potentially serious groundwater contamination problem associated with the landfill at the base, we urge that the relationship between that existing problem and the realignment of base activities be given somewhat greater consideration in the EIS. (See pages 26, 66.) The description of the affected environment should briefly explain what measures, if any, are planned or under consideration to prevent further degradation of groundwater quality. Consideration should be given to ways of mitigating adverse impacts of solid waste disposal associated with the realignment, such as by having source reduction or recycling programs in place when new base activities get under way. (See pages 66, 100.)

Hazardous Waste

Fort Devens has now, of course, been added to the Superfund List. See 54 Fed. Reg. 48,184, 48,187 (1989). In light of the evident seriousness of the contamination at the hazardous waste sites on the base, we urge that the discussion in sections 3.8.2 and 4.8.2 of the EIS be expanded considerably. Every hazardous

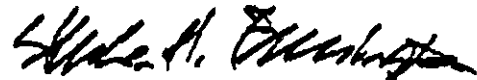
waste site that may be affected in any way by realignment activities should be described in detail, along with the current status of remedial actions and planning for further remedial actions. The EIS should explain how the timetable established by section 120 of the Superfund Amendments and Reauthorization Act of 1986, 42 U.S.C. § 9620(e), will be coordinated with the schedule for base realignment activities, and, in particular, what measures will be taken to minimize the risk of exposure to the environment, the public and Air Force personnel as clean-up and realignment activities occur.

Transportation

The draft EIS takes an overly-sanguine view of the impacts associated with what will be a significant increase in traffic due to the larger number of personnel residing off base. (Pages 87, 94, 95.) Traffic congestion is an ever-growing problem in eastern Massachusetts, with serious air quality, water-quality, land-use and noise impacts. The EIS should include a traffic study that takes into account projections for traffic increases in the entire area affected by the base. Whether or not significant increases in congestion are projected, the EIS should consider ways of mitigating traffic impacts through the establishment of shuttle services, ride-sharing programs, measures to encourage housing development in optimal locations, and so on. The population of employees at the base appears to provide major opportunities to use proven methods of minimizing vehicle miles travelled, and we strongly urge the careful examination of those opportunities.

Thank you for taking these comments into consideration.

Very truly yours,



Stephen H. Burrington
Staff Attorney



SPOUND DEVELOPMENT ASSOCIATES

March 28, 1990

Division Engineer
U. S. Army Corps of Engineers
New England Division
(Attn: CENED-PL-I, Ms. Susan Brown)
424 Trapelo Road
Waltham, MA 02254-9149

Subject: Fort Devens, Ayer, MA

Dear Sir or Madam:

The purpose of this letter is to express positive support for the draft Environmental Impact Report with regard to proposed construction at Fort Devens, Ayer, MA.

As far as we can see this project will not have any negative impact on the area; on the contrary, it would appear to be a logical and appropriate use of the land with a significant benefit to all.

Thanking you for your attention to this matter.

Very truly yours,


Joseph D. Spound

JDS/bt

Joseph E. Patz
1131 Catalina Drive
Sierra Vista, AZ
85635
March 24, 1990

Mr. Jonathan Freedman
CESPL-PD-RQ
U.S. Army Corps of Engineers
P.O. Box 2711
Los Angeles, CA
90053

Sir,

To ensure their enclusion in your final report, I am enclosing the copy of the comments I presented at the public hearing on the base realignment at Fort Huachuca on March 21, 1990. I hope your efforts can help to address and remedy some the issues I addressed. Please keep me informed of any actions arising from these comments, or any other information you may receive applicable to the Information Systems Command's relocation to Fort Devens. Thank you in advance.


Joseph E. Patz

3.2 Biological Environment

3.2.1.1 Vegetation/3.2.1.2 Wildlife

No mention is made of the effect that increased troop and range activity will have on the vegetation and wildlife in those areas.

3.3 Socio-Economic Environment

3.3.1.3 The housing cost estimate uses average housing price of housing owned by USAISC personnel in the city of Sierra Vista, which does not include employees living in the city of Tucson.

3.3.2.3 uses median price of housing as a comparative figure. The geographic bounds of the regions studied are not defined.

3.4 Cultural Resources - the EIS makes no mention of the impact which the increased USAICS troop activity will have upon these resources.

3.5 Noise

3.5.2 Ft Devens: will weapons training activities on ranges cease, other than for the qualification of HQ USAISC personnel. Will this change the unacceptable noise level contours to within the limits of the post?

3.9 Utilities and Public Services

Ft Huachuca

3.9.1.5/4.9.1.5 Public Services and Safety: no consideration is given to the additional fire danger created by increasing the number and size of maneuvers conducted on the ranges.

no mention is made of the capability of the Raymond W. Bliss Army Community Hospital to handle the approximately 1500 military personnel increase the USAICS move will bring with it.

Ft Devens

3.9.2.1 Water Supply: no mention is made of the ability of the groundwater wells to support the requirements which additional personnel added to the post population by the USAISC move will bring.

What is the purity of the groundwater based upon the soil contamination indicated in 3.8.2, the discharge of wastewater into the groundwater supply in 3.9.2.2 and the possible leachate infiltration from solid waste disposal in 3.9.2.4.

3.9.2.4 Solid Waste Disposal: There has no alternative disposal site selected to replace the current landfill after its closure in Dec 1991. Since landfills in surrounding areas have been capped, will there be a problem with waste disposal at Ft Devens after Dec 1991?

Will the increased requirement to transport solid waste after Dec 1991 create additional problems with hazardous waste handling and increase the probability of increased groundwater and resource contamination.

4.1 Physical Environment

Ft Huachuca

4.1.1.3 Geology

Are the structures to be built on Ft Huachuca being constructed considering the shifting nature of the sedimentary pediment that would take place during a magnitude 7.0 earthquake.

Ft Devens

4.1.2.2 Hydrology and Water Quality

This does not take into consideration the impact of the increase of personnel living off-post and increasing the demand upon the municipal water systems surrounding Ft Devens.

4.2 Biological Environment

4.2.1.1 Vegetation/4.2.1.2 Wildlife: No mention is made to the effect that increased range operations and personnel will have upon the San Pedro Riparian National Conservation Area. This area which forms the eastern border of the east range was established by Congress to preserve one the few existing examples of a riparian area remaining in southern Arizona. Disturbance to the freshwater marshes or riparian woodlands within the perimeters of the post by increased range use can have an exponential effect upon the resources and wildlife habitats which currently exist on the San Pedro River.

4.2.2 Fort Devens

4.2.2.1 Vegetation: states the realignment is not expected to impact the aquatic ecosystems surrounding Fort Devens, etc. What about the discharge of wastewater into the groundwater referred to in paragraph 3.9.2.2

4.3 Socioeconomic Environment

4.3.1.2 Population and Employment

What effect will the overall regional population increase of 1,348 have upon the service, recreational and conservation areas in the Cochise County area. What effect will the lower average income of this increased population have upon the property and sales tax bases and other revenue generating levies. Because of the transient nature of the incoming students, who tend to rent apartments rather than buying a home and will be buying fewer durable goods locally, will the residents of Sierra Vista be faced with higher tax rates to maintain the municipal services existing now.

4.3.1.4 Real Estate and Property Values

With a net decrease of 900 military and civilian permanent party personnel, along with the decrease in the average salary, is it a valid assumption that there will be an increase of 167 units of owner occupied dwellings and a decrease of 444 units of renter occupied dwellings. The draft EIS further states that the overall net effect of the realignment action will be substantial in demand for owner-occupied housing. Is this a valid statement?

Fort Devens

4.3.2.2 Population and Employment

The EIS states that that employment in the four county area around Fort Devens is expected to increase by 3,605 people and regional sales by \$412.8 million, both figures are considered not to be significant for Massachusetts. How significant are these figures for economically depressed Cochise County.

4.3.2.3 Changes in Economic Trends

The charts detail the tax revenue gains to Mass. from the realignment, which the report considers insignificant. Why was the same form not used to portray the revenues losses to the State of Az and Cochise County.

4.3.2.4 Real Estate and Property Values This paragraph states that the realignment will result in an increased demand for only 6 owner occupied units in Mass., is this figure valid in light of the fact that 2,131 civilian positions will be gained by Ft Devens.

4.3.2.5 Schools In light of personnel gains is the expectation that school enrollment in the four county area around Ft Devens will decrease by 13 pupils and the Ayer School Sytem is expected to decrease by 260 pupils?

4.4 Cultural Resources

4.4.1 Fort Huachuca

Will the mitigation of impacted cultural resources follow the same path that has been historically followed at Ft Huachuca? An example being the Apache Scout quarters, which were historical structures destroyed in 1983 over a weekend then the destruction announced on the following Monday.

4.6 Traffic

4.6.2 Fort Devens

The traffic volume increases are stated as expected to 11 to 14 percent, yet the report states that this increase is not considered significant.

4.7 Aesthetics and Recreation

4.7.1 Fort Huachuca

There is no mention of the effects that the increased transient military population will have upon the San Pedro Riparian National Conservation Area.

March 23, 1990

Johnathon Freedman
U.S. Corps of Engineers
Los Angeles, CA 90053

Dear Sir,

I was one of the people that attended the public-meeting on the impact the transfer to and from Ft. Devens will have on our community. I don't remember Col. Charles Thomas making any statement that the Army may have predicted a bleaker economy than will occur because of the move, as was stated in the Sierra Vista Herald on Wednesday March 22, 1990. It seems he has already made up his mind on our position before even looking at what the people said at the meeting. It seems ever since the initial announcement of the move they had already had their minds made up as to what they want. In reality we are the scapegoats of someone in the Ft. Devens area that is protecting his or her interests and using us as a means to achieve their goals. It's a case of "Why fix it if it ain't broke."

Three years ago when we moved out here the City was alive with ambition, we were to get a Medical Center on Fry Blvd. and Coronado and there was talk of a Mall coming up on Rt. 92 and as soon as the announcement about the transfer came everything was cancelled. And I understand there are 600 homes for sale in the area, and I understand your new people are not the home buying type. How much more do you need to see what type of problems the move created? The whole area came to a standstill because of the move.

As a retired person I came out here because of the climate and peaceful surroundings we have here. I like a Military town because it usually has a dignity about it that goes with the discipline of the Military. I am a WWII veteran with 8 Months overseas and have a great pride in our country, but I have to be ashamed of the way things are being manipulated to suit the interests of a few.

Since we are the only ones that are being hurt by the move doesn't it become clear as to why we are in this dilemma? We want a right to protect our property values and our environment. As one speaker said at the meeting, "The whole thing stinks."

Sincerely,

Charles C. Smryz
2021 Lexington Drive
Sierra Vista, AZ 85635

Phone # 602 459-1562

Mr. Jonathan Freedman, CESPL-PD-RQ
Los Angeles District
U.S. Army Corps of Engineers
P.O. Box 2711
Los Angeles, CA 90053

3/23/90

Dear Mr. Freedman:

I am an employee at the U.S. Army Information Systems Command and the following comments are provided concerning the environmental and socio-economic impacts of the move of this command from Fort Huachuca, AZ to Fort Devens, MA.

PUBLIC HEARING. A public hearing was conducted in Sierra Vista, AZ on 21 Mar 90. There was no publicity to the general public or the affected work force until 20 Mar 90. Since the hearings are a required part of your process, the lack of advance notice can be attributed either to incompetence or a preconceived attempt to minimize attendance. Why didn't the publicity begin at least two weeks prior to the hearing?

HAZARDOUS WASTE SITES AT FORT DEVENS, MA. The Fort Devens Sudbury Training Annex has at least 11 contaminated areas with explosive residues, chemical laboratory wastes, oil lubricants and other toxic materials. An estimated 35,700 people obtain drinking water from public and private wells within three miles of these waste areas and one private well is only 1600 feet away. At least 46 hazardous waste sites have been identified at Fort Devens containing pesticides, battery acids, PCBs, solvents, toxic metals and many other hazardous materials. Drinking water for Fort Devens employees and Ayer, MA residents is within three miles of these contaminated areas. Will all of these problems be completely corrected before even one Fort Huachuca employee is moved to Fort Devens? Since the Department of the Defense is mandating this move, will the federal government assume liability for any illnesses (or deaths) suffered by Fort Huachuca employees or family members who will be required to live and work in this contaminated area?

HOMEOWNERS ASSISTANCE PROGRAM (HAP). From the time the move was first announced, we were assured by Mr. Jerry Lease's office in the Washington, D.C. Corps office that if the market conditions require implementation of HAP, employees in organizations at Fort Huachuca not affected by the move would be entitled to HAP. Just this week, the Corps has done a complete about-face and has indicated these employees would not be entitled to HAP. Since it is very likely that HAP will be

implemented in Sierra Vista in the future, the impact of this reversal by the Corps is staggering. Many Fort Huachuca employees, both military and civilian, in organizations not affected by the move, will now suffer a significant monetary loss when they sell their homes.

FINANCIAL LOSS TO HOMEOWNERS. Civilian employees directly affected by the move will have an entitlement to DARSE and both civilian and military employees will have an entitlement to HAP if market conditions permit. The EIS, however, severely underestimates the financial impact on homeowners. It would be naive for anyone to assume that there will not be some financial loss for those of us selling homes in Sierra Vista. In addition, the more significant financial damage will be realized at the Fort Devens end. I have travelled to the Fort Devens area three times in the past year. I can assure you that in order to buy a house of comparable size in MA or NH to the one we have now in Sierra Vista it will cost approximately \$100,000 more than our current house. Therefore, employees moving to Fort Devens will suffer financial hardship at both ends and in addition will be forced to purchase homes of lower quality and size.

If you have any questions on this information please do not hesitate to contact me.

Sincerely,



Jack Penkoske
3114 Jacklin Ave.
Sierra Vista, AZ 85635

P. O. Box 745
Sierra Vista, AZ 85636-0745
6 April 1990

Corps of Engineers Los Angeles District
ATTN: CESPL-PD-RQ (Mr. Jonathan Freedman)
P. O. Box 2711
Los Angeles, CA 90053-2325

Re: Fort Huachuca, Fort Devens, and Fort Monmouth Base
Realignment

Dear Mr. Freedman,

I would like to take this opportunity to express my family's opinion of the aforementioned base realignments; and then make a few comments on the Environmental Impact Statement (EIS).

We are in favor of government officials who preform their duties in a fiscally responsible manner, and are not motivated by personal gain. We view the initial action of congress of granting legislative authority to a committee to be nothing more than dereliction of duty. The subsequent inaction of congress to review inconsistent, fallacious, and erroneous data serves to confirm the high quality of highly overpaid mediocrity that exists in congress.

We have written several letters to the Arizona congressional delegation identifying and reiterating the numerous data flaws, inconsistencies, the overall illogical nature of the legislation, as well as the severe personal, adverse impacts. While, for purposes of your review, it is not necessary to provide a detailed restatement of these impacts, I feel we must provide at least a brief summarization:

Significant increase in the cost of housing and related expenditures.

Significant increase in the cost of transportation and related expenditures.

Significant decrease in available income for items like food and clothing.

If we had desired to live in the New England area we would have found jobs there. We chose to live in Arizona because of the close proximity of our relatives, the weather, etc.

Having chronic/severe bronchial asthma, the New England atmosphere is not conducive to things like breathing.

In terms of the actual transfer of functions, we have addressed our congressmen on the following points:

Spending approximately \$500 million to "back fill" an installation originally slated for closure.

Having a probable increased annual expenditure for operations (inclusive of the "streamlining" of the U.S. Army Information Systems Command), anywhere from very minimal up to \$31 million per year.

Historically speaking the U.S. government does not come very close to budget estimates for large scale projects. It is probably safer to say that the actual costs for this project will exceed \$1.0 billion, and will cost many millions each fiscal year thereafter.

The apparent "logic" for the USAISC realignment to Fort Devens was to back fill the military facilities. The intention of the act was to cut Department of Defense costs, not to give a three star billet to a senator seeking self gratification.

If we are trying to close military facilities, which is an admirable goal, why incur these huge expenditures for both new and rehabilitated facilities? Why have "good money" chasing after "bad money," when this country continues to increase its debt by incurring annual deficits? Why move an organization when there can be no apparent improved operational effectiveness or efficiency?

Private industry has already discovered that the cost of streamlining and/or closing facilities is significantly cheaper in the long run, than it is to relocate organizations. A case in point is the recent closure of a IBM facility based in Tucson, AZ; another earlier case is the streamlining and subsequent closure of a Gates-LearJet facility in Tucson, AZ. It seems to me that if the government is desirous of utilizing contractor resources, i.e. OMB Circular A-76 (Contracting Out) then we need to follow the corporate lead in the handling of all fiduciary responsibilities.

Let me now address the actual Draft Environmental Impact Statement. Unfortunately, neither my wife nor I were able to attend the recent town meeting, due to a previous engagement. However, based upon the minimal amount that appeared in the local newspaper, we do not feel that the recent town meeting proved to be representative of the actual sentiments toward the base realignments. There are probably a handful of individuals who stand to make a fortune should the transfer take place, however it will be at the expense of many hundreds of families and other individuals.

Due to the restructuring of Sierra Vista, there will be a need for services which appeal to an audience of approximately 2,000 18-22 single individuals (with only temporary assignments at Fort Huachuca). Such services include bars, used car lots, bordellos, fast food restaurants, etc.

These temporarily assigned personnel have no need to obtain permanent residences in the area, thus the significant number of houses placed upon the local market will remain vacant and unsold, which will add to the already strained housing market. Regardless of what appears to be a stable market, we can drive around the city and see hundreds of houses for sale, houses in foreclosure, etc. We can see houses staying on the market 12 to 24 months, and more. We can see that the starting asking prices are significantly lower than what they were or would have been prior to the move announcement. In terms of our residence, we did not intend to make money from the house. We intended to have a residence that we can live in and enjoy. We did not intend to lose a significant amount of money, especially due to the irresponsible acts of 435 congressmen. There are hundreds of other people that are in the exact same boat.

The city may be trying to "sell" itself as a potential retirement community and/or a ideal location for industry. However, there is only minimal evidence that they are accomplishing anything for retirees; and any evidence that the city can be considered an industrial location has been negative (primarily due to the lack of transportation systems).

Adding 10,000 to 20,000 individuals (affected employees, families, and related support personnel/families) into an already congested area seems ludicrous. While the impact may be small in terms of percentages, there will be an adverse environmental impact. It is not possible to add these numbers of people into an area and honestly believe that nothing much will happen. There will be increased pollution, both home and road construction, garbage and garbage dumps, traffic to and from Boston (we still will be TDY to Washington DC, Europe, the Far East, etc), increased need for fuels, etc.

While these comments present only short glimpses of our position on the base realignment, we hope that we have conveyed our opinion that this entire transfer is a significant waste of resources and will have a significant adverse impact on the local economy, as well as us personally. We see Sierra Vista becoming a stereotypical military town and all the negative connotations associated with a military town.

If there were significant economic and responsible reasons for continuing with the transfer, we would probably not object. Neither we, nor the congressmen who have expressed their view points on the matter, have been able to come up with anything positive about the move. So then, why do it?

Because of this particular base realignment, and its affect on the work force, we have seen significant decreases in both productivity and dedication to the job. This is not because these people lack the ability to be productive and dedicated, but because of the lack of faith in our so called "leadership." We hope that our comments will provide support toward the cancellation of this base realignment effort.

Sincerely,

M. Glenn & Susan S. Finelsen

M. Glenn and Susan S. Finelsen

April 5, 1990

Mr. Jonathan Freedman, CESPL-PD-RQ
Los Angeles District
U.S. Army Corps of Engineers
P.O. Box 2711
Los Angeles, CA 90053

Dear Mr. Freedman:

The purpose of this letter is to submit my comments regarding the Draft Environmental Impact Statement (DEIS) on the proposed realignment of Information Systems Command at Fort Huachuca, AZ.

I attended the public hearing hosted by your organization on March 21 and noted that Colonel Thomas stressed that the realignment of the U.S. Army Information Systems Command is a component of the Base Realignment and Closure Act which has become law. As a result, Colonel Thomas emphasized that although the realignment of the Information Systems Command may be seen as ill advised, "...the Army must obey the law."

I cannot fault Colonel Thomas' analogy since he is a soldier and must obey his orders. However, over the past several months I have heard "...it's the law" to be a common rationale by the Army leadership for proceeding head long into moving the Information Systems Command in spite of factual data from a variety of creditable sources that such a move will result in a significant financial loss to the the Army.

With this in mind, I read with interest the enclosed article which appeared in the April 2, 1990 edition of Defense News which noted "Congress is delivering its most forceful ultimatum yet in a raging controversy over U.S. Army reluctance to comply with a law (emphasis added) requiring the service to conduct side-by-side tests of three interim tank-killing missiles."

As you can see in the article, the Army has opted to defy a law over a perception that such lawfully mandated testing would "...cost up to \$200 million...which the Army cannot afford in a shrinking budget."

I am certainly in no position to comment on the sensibility of the Army's reluctance to comply with the law regarding a complex issue such as missile testing, but I can observe that the Army appears to be selective in which laws it chooses to obey. I can only deduce that the Secretary of the Army's decision to defy Congress regarding an issue involving a \$200 million bill for missile testing shows that the Army is not, to its credit, inclined to systemically march "off a cliff" in response to law on certain issues. I am puzzled that the re-alignment of the Information Systems Command, which has a much greater negative impact on the Army's shrinking budget, is not also a choice of Secretary Stone for a stand in the interest of sensibility and fiscal responsibility.

I would recommend that the DEIS be amended to reflect that the Army is choosing to comply with the Base Realignment and Closure Act in spite of known flaws and financial negatives. Further recommend that the DEIS reflect the legal options available to the Army to seek amendment of the portion of the Base Realignment and Closure Act that now "requires" the Army to move the Information Systems Command.

Sincerely,


Thomas M. Reardon

2057 Piccadilly Court
Sierra Vista, AZ 85635

Congress to Army: Start Missile Tests

By CALEB BAKER
Defense News Staff Writer

WASHINGTON — Congress is delivering its most forceful ultimatum yet in a raging controversy over U.S. Army reluctance to comply with a law requiring the service to conduct side-by-side tests of three interim tank-killing missiles.

A failure to conduct the congressionally mandated evaluation, pitting the Army's favored choice against two foreign antiaarmor weapons, may result in more severe cuts to the service's 1991 and 1992 budgets, congressional officials warn. It also would likely adversely impact ongoing tests of U.S. weapons in Sweden, France, and the Federal Republic of Germany.

The controversy involves the Swedish Bofors Bill and French-German Milan 2 weapons, which are vying to replace the original M-47 Dragon missile as an interim system until the Army's prized Advanced Antitank Weapon System-Medium (AAWS-M) is fielded in 1994. The Army favors an improved version of the Dragon, known as the Dragon 2.

The Army has proposed a plan that would extend side-by-side tests of all three missiles up to 20 months, far longer than the six months Congress estimates it should take, officials say. Further, the Army claims the combat-like evaluation of the missiles would cost between \$20 million and \$30 million. Such funding would have to be shifted from prior-year funding lines, according to a March 20 Army information paper.

Congressional and industry officials say the plan, which is not final, would violate the law.

Army Secretary Michael Stone told *Defense News* last Friday that the debate over an interim system "is a classic example of the Army getting whipsawed." Stone said it would cost up to \$200 million to field either the Bofors Bill or Milan, which the Army cannot afford in a shrinking budget.

"The bottom line is we are trying to comply with the congressional requirement, although from a management viewpoint, I do not see the sense in

See ARMY, Page 28

what Congress is asking us to do," Stone said.

Congress in the 1990 National Defense Authorization Act ordered the Army to spend an estimated \$15 million to test the missiles after the Army allegedly failed to properly conduct the tests in 1988. In the previous test, the Army evaluated the Milan and Bofors Bill, but not with the Dragon 2.

The law requires the Army to provide conferees with the results of side-by-side firings by May 29.

The explosion of a relatively small program to field an interim antiarmor weapon into a sweeping debate has caught top Army officials by surprise. It has truly become "a thorn in the Army's side," one congressional official says. It has been likened to a chess game, in which two sides posture pawns to prepare for a larger battle for the entire board.

Supporters of the interim missile want to field a missile to replace the original Dragon, widely believed by the Army and Congress to be ineffective against modern Soviet tanks, and as a hedge against a possible delay in the deployment of AAWS-M, which would use sophisticated fire-and-forget seeker technology.

In the House, members, including Reps. Charles Bennett, D-Fla., Charles Wilson, D-Texas, and Marvin Leath, D-Texas, have criticized what they consider Army attempts to stonewall.

In a March 23 letter to Stone, Bennett reiterates concerns he outlined in a Dec. 19 letter to the Army leader, in which he warns that it would be unfortunate if the Army "sought to derail it through chicanery, such as trying to delay the tests by a tortured reading of the law..."

In the latest letter, Bennett asserts "this seems to be what has occurred," and urges Stone to settle the matter in a meeting with members of Congress. Last Thursday, Bennett told *Defense News*

that he expects Stone to say "he'll do it, and at a lower figure. The Army is just trying not to do it."

In the Senate, the interim missile has become one of many examples of Defense Department noncompliance with congressional mandates. As a result, Congress may be forced to put even stricter language into future bills, according to Sen. Daniel Inouye, D-Hawaii, chairman of the Senate Appropriations defense subcommittee.

"The Pentagon can be selective in response to report language, but they run the risk of Congress coming back the next year and holding funds hostage," one key Senate staff member says. "But more specifically, this is a failure to comply with the law. The Army must follow it unless they want to fight it in court."

In Sweden, military officials are watching the U.S. Army's response on the tests, and have warned that reluctance to test the Bofors Bill may affect the tests of the M1A1 Abrams main battle tank by the Swedish armed forces. "We're not asking the U.S. government to buy Bill; we're asking them to test it," says Lars Bjarde, a military procurement official in the Swedish Embassy here.

The Army's dedication to the Dragon 2 drew additional fire last summer when the Pentagon's independent testing office determined the Bofors Bill to be the most effective missile of the three candidates. The congressionally mandated Operational Test and Evaluation office report revealed substantial differences in the Pentagon over the nature and purpose of the tests.

The Bofors Bill is built by AB Bofors, Karlskoga, Sweden. The Milan 2T missile, the other contender, is being developed by Euromissile, a Paris-based joint venture company formed by France's Aerospatiale and Messerschmitt-Boelkow-Blohm, Munich, West Germany. Euromissile officials say they are also observing the ongoing debate.

Armed with an internal analysis of the 1988 tests of Milan and Bofors Bill, which remains classified, the Army has repeatedly stated it plans to field the Dragon 2, which has not been tested under combat-like conditions. The February 1989 assessment concludes both

foreign missiles fail to meet the service's requirements because of their high deployment cost and heavy weight compared to the Dragon, officials say.

A minimum of \$14.6 million would have to be spent on the tests, according to a March 20 in-

formation paper submitted to Congress, but that would force the Army to use some test data from the 1988 tests on the Milan 2 and Bofors Bill. Such tests "do not comply with the specific requirements established" by the law, the paper states.

Harry E Wilson
2120 N Callow Ave
Bremerton, WA 98312-2908
April 14, 1990

Mr Jonathan Freedman
Corps of Engineers Los Angeles District
Attn: CESPL-PD-RQ
P.O. Box 2711
Los Angeles, CA 90053-2325

Dear Sir

Thank you for the opportunity to comment on the Draft Environmental Impact Statement for Fort Huachuca, Fort Devens and Fort Monmouth Base Realignment and Supplemental Information for Fort Huachuca Realignment.

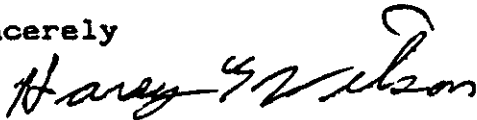
On page 99, para 4.9.1.4, solid waste recycling should be required vice being encouraged.

On page 99, para 4.9.1.5, it states that the base hospital is currently operating at full design capacity. Where are the increased additional requirements with more personal transferred to Fort Huachuca going to be taken care of at?

The possibility of asbestos at Fort Devens and Fort Monmouth needs more discussion under the Air Quality sections.

Thank you for your time and consideration.

Sincerely



Harry E Wilson
2120 N Callow Ave
Bremerton, WA 98312-2908

12 APRIL 1990

MEMORANDUM FOR RECORD

SUBJECT: Telephone Conversation and Comment Regarding the Draft EIS
on the Proposed Realignment of Fort Huachuca, Fort Devens,
and Fort Monmouth

1. Subject conversation involved Ms. Rita Jackson, a resident of Sierra Vista, Arizona, and Ron Ganzfried of CESPL-PD-RQ, co-manager of the preparation of the subject EIS.
2. Ms. Jackson expressed her concern that the EIS consider the possible impacts to the Sanborn long-nosed bat (Federally listed as an endangered species) and other raptors and their habitat, due to increased training activities on affected ranges.
3. Ms. Jackson also requested a copy of the Final EIS to be notified of other pertinent EIS actions.


RON GANZFRIED

BEFORE THE ARMY CORPS OF ENGINEERS

In the matter of:

BASE CLOSURE AND REALIGNMENT ACT

DRAFT

TRANSCRIPT OF PROCEEDINGS

March 21, 1990

SIERRA VISTA, ARIZONA

SIERRA CERTIFIED COURT REPORTERS
Reported by: Jo Anne Drosche, CSR

(602) 458-6810
25 El Camino Real, Suite Four
Sierra Vista, Arizona 85635

A P P E A R A N C E S

ARMY CORPS OF ENGINEERS:

Col. Chuck Thomas
Lt. Col. Craig Johnson
Jonathan Freedman
Ron Ganzfried
Dennis Eich
John Keever
Sue Brown
Sharon Clark

INFORMATION SYSTEMS COMMAND:

Tom Cochran
Lt. Col. Barry Kerby

INSTITUTE FOR WATER RESOURCES:

Bill Clark

Transcript of proceedings, taken at the
Ramada Inn, 2047 South Highway 92, Sierra Vista, Arizona,
commencing at 7:00 p.m., on Wednesday, March 21, 1990,
reported by Jo Anne Drosche, a Certified Court Reporter
and Notary Public in and for the State of Arizona.

* * * * *

Wednesday, March 21, 1990, Sierra Vista, Arizona

7:00 p.m.

PROCEEDINGS

COL. THOMAS: Good evening, ladies and gentlemen. I think we might as well get started. Can you hear me? Now can you hear me? Is that any better?

I am Colonel Chuck Thomas, Los Angeles District Engineer, the Army Corps of Engineers. I'd like to welcome you to a public meeting to discuss the Environmental Impact Statement that we've prepared for Information Systems Command, and with Information Systems Command and a lot of other players, to analyze the environmental impacts of the Base Realignment and Closure Act mandate that the Information Systems Command move to Fort Devens, Massachusetts, and the Intelligence Center and School move here to Fort Huachuca.

With me is a group of executive branch representatives from different parts of the executive branch. At the front table is Mr. Tom Cochran, who represents the Information Systems Command for BRAC actions. And in the audience is Colonel Holtry, his boss.

To my left is Jonathan Freedman, who is the Los Angeles District employee, and the Environmental Impact Statement, EIS project manager for the Los Angeles District. Also here tonight is my deputy, Lieutenant Colonel Craig Johnson, in the rear, who is responsible for the overall District effort in Base Realignment and Closure; Ron Ganzfried, who is the co-project manager for this Environmental Impact Statement, in the middle; Dennis Eich from the Phoenix office of the Los Angeles District; John Keever, who's the Base Realignment Project Manager in Los Angeles District.

From the Corps' New England Division we're pleased to have Sue Brown. Sue, if you'd stand up. She's the project manager for the Fort Devens and Fort Monmouth portions of this move that we have going on. And from the Institute of Water Resources, another Corps of Engineers command, is Bill Clark. We also have with us from the Baltimore District, Cal Pearce.

Tonight what I'd like to do with you really, is before I give you an opportunity to ask questions -- which is the real purpose. We have a draft Environmental Impact Statement, and now we're interested in your feedback -- is talk a little bit about the background, and tell you what we're here to do and what we're not here to do, establish a few ground rules, just common sense things so that we keep the meeting moving, and then open it up to your questions.

The Secretary of Defense established the Base Realignment and Closure Commission in 1988 for the purpose of recommending how to improve the efficiency of our Armed Forces. Fort Huachuca was selected by that committee as one installation to be realigned to contribute to this goal.

So I'm really not here to debate the wisdom of that decision or the law that followed on that decision that mandates that action. But my role has been to oversee the preparation of the EIS, the Environmental Impact Statement, which focuses on potential environmental and social, socioeconomic impacts of the realignment, to share those findings with you, and to solicit and welcome your feedback.

The Information Systems Command is the lead Army agency for the Fort Huachuca realignment effort, and the Los Angeles District prepared the EIS.

We kicked this off last June with a public meeting, and gathered some very valuable information from you at that time, from members of the public, from the City of Sierra Vista, the County, ISC, the Garrison and other agencies, and now we're here to give you our draft results and let you tell us what you think of them.

Your concerns that were voiced in last June's scoping meeting and other correspondence, written correspondence, helped us to key in on the important issues that we are addressing in the draft EIS. And we will have another open written comment period between now and April 15th. So if you leave the meeting and would like to write us and tell us what you're thinking about, we'd welcome you to do that between now and April 15th.

And the address is in the handout. Did everyone get a handout that looks a lot like this (indicating)? A couple of pages. The second page should have Jonathan Freedman's address on it.

We're recording this meeting verbatim. We have a transcriber that will record everything that happens here, and it will become an official part of the Environmental Impact Statement. So the questions that you ask will be recorded, and our answers here, and then any follow-up answers.

If you ask questions that we'd like to research, the answers to those will be placed in the final Environmental Impact Statement, which will be available in late June in the Fort Huachuca Library, Sierra Vista Library, City Hall, and the Huachuca City Library and City Hall. We're also keeping a record of attendance, so please fill out a registration card if you haven't.

Now let me just talk a little bit about the draft EIS. And if you'll refer to the schematic diagram of how the move happens on the second page, it at least helps form a basis for the numbers and spaces involved.

As you can see, there are about 2255 military -- spaces being moved from Fort Huachuca to Fort Devens, and about 3030 coming from Fort Devens to Fort Huachuca. Those numbers are approximate. They'll certainly change between now and when it happens, but that's in the ballpark of what we're dealing with.

While the Act, while the law mandated this move take place, it didn't mandate exactly how. And so we had some latitude in our Environmental Impact Statement to look at alternatives. The proposed plan provides for realignment of the Intelligence School to Fort Huachuca with \$118 million construction program for new facilities followed by occupancy by September, 1995. So we will build new facilities that will accommodate the new people that are coming in, and that's the proposed plan.

We tried to look at alternatives to that, bringing people in faster, somehow providing alternative facilities, but they really just didn't exist. And the alternatives that we tried to look at turned out to be infeasible.

So we proceeded with the EIS. And then regulation requires us to produce a reasonable worst case analysis of what could be the environmental and socioeconomic, biological, cultural, historic, water, utilities, those kinds of impacts at Fort Huachuca and the other two installations. I'll just be focusing on Fort Huachuca tonight.

We found that the construction itself at Fort Huachuca, that \$118 million will not significantly affect the biological, physical or cultural resources. So there are no significant environmental aspects associated with the pure move, the relocation of people.

There will be a different use. There will be a different use of the terrain. And the plans are not yet firm as to how the terrain -- how they'll train, how the troops will train on the terrain. So there may be additional environmental impact work that has to be done as the move proceeds and as plans are formulated for the training, to make sure that those biological and cultural resources are protected.

Now, as part of the analysis, we've produced a socioeconomic forecast, worst case forecast of what might happen in the Fort Huachuca area. And it's a fact that the troops coming in will receive less pay than the folks who are moving out. So there's a mathematical model that deals with that.

And as you can imagine, the fact that the salaries, the total salary of the people coming in will less than the total salary of the people leaving, when you crank that into a mathematical model, it will predict some, and it did predict some, adverse circumstances.

I guess I'd just like to put a little spin on that from my point of view. I knew that the Cochise County and the Sierra Vista City have been working hard to develop plans on how to deal with this new situation. Fort Huachuca has a long, proud history, and so does Sierra Vista. And we've dealt with changes at Fort Huachuca since the days of the Buffalo Soldier. This is nothing new to a town of pioneers like yourselves.

And your elected representatives really have had a lot of foresight in trying to figure out how to mitigate the loss, the different culture that you're going to see here, because of different people living here. You'll have different neighbors. You'll have a different partner at the Post.

But you will have a partner at the Post. Fort Huachuca isn't closing. And so, from my point of view, there's a bright future all in all for Fort Huachuca, Sierra Vista and Cochise County, although it is different. And our worst case reasonable analysis shows that if someone were just sitting back on his haunches and waiting for this to happen, and the only thing that happened was this exchange of people, there would be some pretty severe consequences.

So we plan to finish and publish the final EIS in June, 1990, and there will be another public review period for thirty days after that. And there will be no realignment activity, construction or moves until the -- that final EIS is completed and the record of decision is signed. So we expect to award construction contracts at Fort Devens in August and at Fort Huachuca in September.

Let's see what other things I should cover before we get started. I'm about to open it up to your questions. And I have a list of some that I'll call on to ask, and then open it up to anyone else. I'd ask that you clearly state your name when you come to the microphone, and I'd just like to ask that you follow the basic ground rules of a public meeting that we outlined on that first page. Is there anyone that has any question about those, or problems with them?

The first name that I have is Jody Klein.

MR. KLEIN: Thank you. I'm Jody Klein, the County Planning Director. Before I begin, I talked with Supervisor Gene Manring who is unable to be here tonight because he has another meeting on solid waste disposal that he could not get out of, so he expressed his regrets that he can't be here tonight.

I have just a few concerns with the EIS. And one of those is that I'm not really sure that this is a meaningful opportunity to really be involved in the process since the decision has already been made, and it's like doing something after the fact to do that. Normally, an EIS presents various alternatives to action and courses of action. And the constraints are that it's already a

done deal, and that this is justifying what has already been decided upon.

But one other concern, and I'll just be brief, is that an EIS typically talks about mitigation measures. And you mentioned that City and County folks were actively engaged in processes to try to do that. And I think we all recognize the need to diversify the economy here, and to be actively engaged in economic development efforts, and both City and County are strongly behind those.

But I think it would be naive to just pass things off and say that those things are going to happen right away, and that the short-term impacts, and even on a longer range basis, these are significant impacts. And, I definitely agree that there are going to be some significant socioeconomic impacts.

And I don't think the EIS has really dealt with mitigation measures effectively, and I'm not sure that it can deal with it effectively, to be honest with you. So those are just some basic comments to start off.

COL. THOMAS: Thank you. Barbara Garcia.

MS. GARCIA: I'm Barbara Garcia. I'm a GS-5 secretary at Fort Huachuca. I'm moving. My husband is with the Garrison and not moving. So I hope somebody pays for our divorce, but that's all right. My biggest complaint is that, No. 1, I did not get hold of this until today, so I had to do some fast skimming, and then I only bootlegged a copy to read through it.

In there you speak of the average cost of housing at Fort Huachuca and the mean cost of housing at Fort Devens. The mean cost at Fort Devens is \$126,000. You have 1,107,214 housing things there, and at Fort Huachuca you say you have 70,000. I'd like to know how big an area you figured to get those figures with.

In other words, Fort Huachuca from here to where, and Fort Devens from here to New Hampshire, maybe? That's an awful lot of houses in a short period, unless you're counting downtown Boston.

And when you figure -- now, the Fort Huachuca figures showed that 50 percent of the houses were this price range, 20 percent were this price range. We did not get that from Fort Devens at all. That's one question. So I do have some questions on that.

Did you also, in the cost and the impact, figure the cost of building buildings here at Fort Huachuca so they could withstand earthquake? Although we haven't had one in a few years, we are in a seven Richter scale for earthquakes, and we've had some pretty bad ones.

In regards to the deployment of troops in the field: Years ago the settlers practically ruined this whole valley by overgrazing. Now you can overrange, I guess, too, with the troops. Have you really studied into what you're going to do on that? Plus, the runout with all the construction that you're going to be having will flood Sierra Vista.

And I've been here 25 years, and my husband's family came here in 1887, and went to work at Fort Huachuca. So I guess you'd call him a native. The minute they start construction on Fort Huachuca, we'll have a deluge of water going down Fry Boulevard.

And did you also take into consideration, with the different type of troops that you've got coming in here, we're now going to have Tucson's Speedway? And for any of you that have been here for a long time, you know what Tucson's Speedway's got. It's got the strip joints, it's got the bars, and that's just about all that's on that area now.

And with young troops, and taking the higher graded people out who are buying permanent-type structures instead of cars and the fast food joints, tell me that's not going to affect this community. Thank you.

COL. THOMAS: Thank you. Claude Sanders.

MR. SANDERS: Thank you. I'm Claude Sanders, Assistant Superintendent, Sierra Vista Public Schools. I apologize for my little scribbled notes. And also Dr. Lopez, the superintendent, could not attend tonight. He wasn't dealing with solid waste, but with a different matter.

Our concern, of course, is looking through the impact study and the effects it will have on education and the use of facilities, and things of this nature in education in our excellent school district. We feel we have probably one of the finest school districts anywhere in the United States, based on our achievement scores and things of this nature, and wonder what this is going to do to us.

Also, looking at the study, it does not affect, nor does it talk about the idea that the schools that are on Fort Huachuca are separate and independent schools. They are run by Fort Huachuca and the military.

And we educate the high school students. There is no high school on Fort Huachuca. So it is a major impact if we're talking about younger children coming in at a loss of older students.

We have just passed a bond issue in this community for \$25 million to build a new high school. That definitely, in this change in age of students, will affect us tremendously.

We also wonder, when it talks about the large increase of students, how that would be taken care of on Fort Huachuca due to the fact that students who attend the Fort Huachuca schools live on the Post. Students who do not, attend Sierra Vista schools. We are not a tied-together district in any way, except for high school students. It is just -- you know, I'm not sure where they could accommodate those if they've taken into consideration the tremendous need for new facilities, that would do it on Fort Huachuca.

And I know we're not to debate the thing, but as representing the school district, I just have to say that I think this is a very poor idea.

COL. THOMAS: Thank you. With all your comments, we have the transcript. We'll put them in the EIS with questions as best we can address them, or comments about where they might be addressed. And if any of you would like to speak with me afterwards, or any of the people with me, I'd be glad to give you what information might be appropriate to share either one on one, or for the group.

Of all the questions that have been asked so far, I really don't have a good answer, except if there are weaknesses in the EIS, that's why we're here, to find them. And we're taking notes on what you're pointing out, and we'll look at those sections in the EIS again.

The next person whose card I have is Dana Harriman.

MR. HARRIMAN: I'm Dana Harriman. I have a business here in town, and am also a contractor. I'd like to talk a little bit about how this first started, I think, and where we're at today with this EIS. I think what Jody was talking about, we're kind of far down the road with this EIS now, and it should have been considered back when this was first put together.

It first started out with Base Realignment and Closure. That came out in January of last year. Immediately after that hit the newspapers, the lending institutions started cutting off money to this area, which created a very definite impact in this area. The construction in the private sector virtually dried up, because they didn't know what was going on here. Government contracts dried up, even more so in the DEH area. Contracts were given out sole source to their contractor they already had on board, which limited the construction contractors to nothing in this area. And they're all starting to bid or trying to bid areas outside of this region, because there is nothing left in this region.

The people affected, it's really throughout the community. Not only are the contractors affected, the insurance companies are affected, the bonding is affected. We're no longer having construction going on, so therefore bonds don't occur. Contractors are not taking these out.

The banks, all the people that the contractors deal with, that money is no longer here in the community. The wholesale houses and the other areas that are also affected, that sold the materials to the contractors. The construction that was addressed, the areas that were talked about, it was talked about \$118 million that are going to be spent through 1995.

Typically what we have seen here in the Sierra Vista area, those contracts have been so large they're impossible to bond by these contractors here. So the work will be done by contractors outside of the city of Sierra Vista, or outside of the community. When that happens, the money, the profit, the overhead, that all leaves this area. It is not left in this community.

And there is a statement in the Environmental Impact Statement, in the draft, that talks specifically about the construction that will be occurring, not considering the effects of that, because it will probably have a positive impact on this community. There is an area in the impact that addresses that. I'd like to see that taken out, or some further discussion made on that, because that definitely is going to impact the area.

The other things that were in, I wasn't able to go through this as much as I would have liked to have. It talks in here -- it is very difficult to mitigate significant in the economic impacts. I don't think it's difficult at all if there is a commitment by the Department of Defense. It is written into the Environmental Impact Statement to do something about that.

There are some milestones laid out as to what would happen. Some of the things that could happen have happened in the past in other areas, have to deal with initiatives being given to contractors in this area, some type of positive percentage of bonus on the contract, that they would have a 10 percent advantage or a 5 percent advantage, something to be given to the contractors in the area that is going to be most impacted. And it should be done through this period through 1995.

In short, one of the things, without going into a lot of this, I think there has been a lot of disinformation out there, a misunderstanding about the contracts and the construction. The contractors are very upset about it. We would like you all, the Corps of Engineers, to take a little bit closer look at it as to how it is going to affect this community, the monies, and how they leave this community.

If we have a \$118 million contract, contracts, worth of contracts going on through 1995, that represents approximately \$20 million of profit and overhead in those contracts. And if those are out-of-town contracts, that's \$20 million that are going to be leaving this area that could be reinvested in this area and used more wisely in this area to help build this community.

We do not see that the impacts in this area were going to be as severe as what was originally announced. Unfortunately, when it first hit the papers back in January, everybody thought Sierra Vista was going to dry up and go away. Some of the lending institutions in Tucson, because of misinformation that hit the newspapers, said, "Oh, gee, we thought Fort Huachuca was closing." Closures got out, not realignment got out, a lot of misinformation.

We need to get that relooked at. I think there has to be some better publicity put out so people better understand what's happening, so there is less fear in this community. And I thank you very much.

COL. THOMAS: Okay. Thank you. A couple of you have now pointed out the fact that the EIS is being prepared after the decision, which is absolutely true. The purpose of the EIS is to find the least damaging way to execute a decision that's been made. So there's no part of the EIS that's intended to reexamine that decision at all.

Our goal is to make sure that we document what environmental damage and what socioeconomic impacts there are, and make that a matter for the public and official record. So those specific comments that you have, where our documentation is weak or where it's lacking and should be added, are very valuable at this stage. And written comments, if you have some specifics, I also encourage.

I don't want to tell you or give you a dose of the obvious of how contractors do business, because you're obviously a smart contractor. But when there are large construction projects, those are composed of small pieces that large contractors and people who are able to get bid bonds for multi millions of dollars, subcontract to smaller contractors.

So the shrewd contractor keeps track of the Commerce Business Daily, and knows who the plan holders are, and is actively discussing with them the competitive advantage that you have by being local, and the benefit that you can be, that you can use by being their sub. There will be some big contracts in the beginning. We have a commitment to make some barracks happen and some mess halls happen, and to have some things happen real fast. But after the first two years, there will be some smaller contracts, certainly less than five, some one and two million dollars, that we expect the local contractors would be able to bid on independently.

So there is some hope there. And I've heard your request that we look at that. Each prime contractor is required to submit his plan for bidding that, for subcontracting his work. And we have some -- although we have laws that we have to stick with -- we have some latitude. I'll take your comments into consideration, certainly. Thank you for them. Is there anything else that we should discuss on that right now?

The next name I have is Cecil Nist. Is it pronounced Nist?

MR. NIST: I didn't have anything, sir.

COL. THOMAS: Oh. Mr. Bruce Dockter.

MR. DOCKTER: My concerns have been addressed. Thank you.

COL. THOMAS: Michael Flannery.

MR. FLANNERY: I'm speaking as a resident of the area. And I think there's a little-publicized fact of great importance that I would hope might at least be mentioned or highlighted in the EIS. It's no secret this is a one-engine economy here in Sierra Vista, and the opportunity to correct that gratuitously was perceived by General Paige a long time ago. And Senator Goldwater introduced a bill, and it became public law, that 200 acres would be made available for sale, which your office is handling, at the airfield, adjacent to Libby Army Airfield, for the purposes of an entrepreneur buying that at fair market value, to develop some kind of industrial base, an air industrial park or some kind of an economic engine for the economy.

But yet, that's not mentioned in the environmental statement, and neither is it mentioned by any of the planners or anyone that I can hear saying anything about it. So for publicity's sake, if it was mentioned, it's about to go on the market. I think Mr. Eichert is here from the real estate office. He probably could update the status on that.

But if somebody would buy that and put some kind of a project there to employ other people in Sierra Vista, I think that would mitigate a lot of the economic impact. Now, perhaps enabling legislation at the federal level -- of course, we are by the border to have a joint venture, say a quillador (ph.) project with Mexico would be in order. But yet nobody seems to know about this 200 acres that's about ready to go on the market, which I think is a very gratuitous event.

COL. THOMAS: I'm not sure that fits with the EIS, but we -- is it in the EIS?

MR. FREEDMAN: Yes, it is.

COL. THOMAS: Hidden in the EIS probably, not highlighted. Maybe we could highlight it better. I think land being available is a --

MR. FLANNERY: I think it's a key factor that something happening here is positive.

COL. THOMAS: Thank you. Joseph Patz.

MR. PATZ: Colonel Thomas, I've had an opportunity to read the draft EIS, and I have some statements I'd like to make. And I'd like to refer to them by section number of the booklet.

And the first comment that I have to make is under Section 3.2, Biological Environment. And it's areas 3.2.1.1, Vegetation, and 3.2.1.2. No mention is made of the effect of increased troop and range activity will have on the vegetation and wildlife in those areas.

Section 3.3, Socioeconomic Environment. 3.3.1.3. The cost estimate uses the average housing price of housing owned by USAISC personnel in the City of Sierra Vista. This does not include the employees which live in the city of Tucson.

3.3.2.3 uses the medium price of housing as a comparative figure for Fort Devens. Apples and oranges. The geographic bounds of the region study is also not defined.

Under item 3.4, Cultural Resources, the EIS makes no mention of the impact which the increased ICS troop activity will have on these resources.

Under item 3.5, Noise, item 3.5.2. At Fort Devens, will weapons training activities on ranges cease other than for qualification of Headquarters ISC personnel and reserve personnel? Will this change this unacceptable noise level contours to within the limits of the Post?

Item 3.9, Utilities and Public Services. At Fort Huachuca, items 3.9.1.5 and 4.9.1.5, Public Services and Safety. No consideration is given to the additional fire danger created by the increasing the number and size of maneuvers conducted on the ranges. No mention is made of the capability of the Raymond W. Bliss Army Community Hospital to handle the approximately fifteen hundred military personnel increase which ICS brings with it.

At Fort Devens, item 3.9.2.1, Water Supply. No mention is made of the ability of the groundwater wells to support the requirements of additional personnel added to the Post population by the ISC move. What is the purity of the groundwater based on the soil contamination indicated in paragraph 3.8.2, the discharge of wastewater into the groundwater supply in item 3.9.2.2, and the possibly leachate infiltration from solid waste disposal, in item 3.9.2.4?

Item 3.9.2.4, Solid Waste Disposal. There is no alternative disposal sites selected to replace the current landfill after its closure in December of 1991. That's Fort Devens. Since landfills in surrounding areas have been kept, there will be a problem with waste disposal. The increased transportation requirements of solid waste after December, 1991, will create the additional problems of hazardous waste handling, and raise the possibility of increased groundwater and resource contamination.

Item 4.1, Physical Environment at Fort Huachuca. Item 4.1.1.3, Geology. Are the structures to be built at Fort Huachuca being constructed considering the shifting nature of the sedimentary pediment that would take place during a magnitude 7.0 earthquake?

At Fort Devens, item 4.1.2.2, Hydrology and Water Quality. This does not take into consideration the impact of the increased personnel living off Post, and increasing the demand on the municipal water supplies -- systems, excuse me, surrounding Fort Devens.

Item 4.2, Biological Environment. Items 4.2.1.1 Vegetation, 4.2.1.2, Wildlife. No mention is made to the effect that increased range operations and personnel will have upon the San Pedro National Riparian Conservation area. This area, which forms the eastern border of the East Range, was established by Congress to reserve one of the few existing examples of a riparian area remaining in southern Arizona.

Disturbance to the freshwater marshes or riparian woodlands within the perimeters of the Post by increased range use, can have an exponential effect upon the resources and wildlife habitats which currently exist on the San Pedro River.

Item 4.2.2 at Fort Devens. Under that, item 4.2.2.1, Vegetation, states that the realignment is not expected to impact the aquatic ecosystems surrounding Fort Devens, et cetera. What about the discharge of wastewater into the groundwater referred to in paragraph 3.9.2.2?

Item 4.3, Socioeconomic Environment. Subparagraph 4.3.1.2, Population and Employment. What effect will the overall regional population increase of 1348 have upon the surface, recreational and conservation areas in the Cochise County area? What effect will the lower average income of this increased population have upon the property and sales tax bases and other revenue-generating levies?

Because of the transient nature of the incoming students who tend to rent apartments rather than buying a home, and will be buying fewer durable goods locally, will the residents of Sierra Vista be faced with higher tax rates to maintain the municipal services existing now?

Item 4.3.1.4, Real Estate and Property Values. With the net decrease of 900 military and civilian personnel, permanent party personnel, along with the decrease in the average salary, is it a realistic, valid assumption that there will be an increase of 167 units of owner-occupied dwellings, and a decrease of 444 units of renter-occupied dwellings?

The draft EIS further states that the overall net effect of the realignment action will be substantial in demand for owner-occupied housing. Is this a valid statement?

Fort Devens, item 4.3.2.2, Population and Employment. The EIS states the employment in the four-county area around Fort Devens is expected to increase by 3605 people, and regional sales by 412.8 million. Both figures are not considered to be significant for Massachusetts. How significant are these figures for economically depressed Cochise County?

Item 4.3.2.3, Changes in Economic Trends. The charts detail the tax revenue gains to Massachusetts from the realignment, which the report considers insignificant. Why has not that same form been used to portray the revenue losses to the State of Arizona and Cochise County?

Item 4.3.2.4, Real Estate Property Values. This paragraph states that the realignment will result in an increased demand for only six owner-occupied units in Massachusetts. Is this figure valid in light of the fact that 2131 civilian positions will be gained by Fort Devens?

Item 4.3.2.5, Schools. In light of personnel gains the expectation that school enrollment in the four-county area around Fort Devens will increase by thirteen pupils, and the Ayer (ph.) school system is only expected to increase by -- excuse me. That was six pupils. And the Ayer school system is only expected to increase by thirteen pupils.

Item 4.4, Cultural Resources. Item 4.4.1 at Fort Huachuca. Will the mitigation of the impacted cultural resources follow the same path that has been historically followed at Fort Huachuca? An example being the Apache scout boarders which were historical structures, destroyed in 1983 over a weekend, and the destruction was announced on the following Monday.

Item 4.6, Traffic. Under Fort Devens, item 4.6.2, the traffic volume increases are stated as expected to be 11 to 14 percent on Post, yet the report states this is not considered significant. 11 to 14 percent to me is a pretty significant figure.

Item 4.7, Aesthetics and Recreation. 4.7.1 at Fort Huachuca. There is no mention of the effects that the increased transient military population will have upon the San Pedro National Riparian Conservation area.

That's the end of my statement. I'd just like to say that I think the whole idea of the move sucks, and I would also like to thank Representative Kolbe and Senator McCain and Senator DeConcini, and I sure will remember them on election day. Thank you.

COL. THOMAS: Thank you. A lot of good questions there, and we'll try to address those in the EIS. I'd be glad to talk to you about some of your environmental concerns, especially. I know the people on Post are committed to making sure the environment is protected. And there will be more studies that are required, because every training area that's used has to be analyzed for environmental impacts before it's used. And so if they have to move beyond the areas that they train now, they'll have to study those. And the highlighted areas that you provided, they'll help kind of zero in on what's important. David Whiteway.

MR. WHITEWAY: I pass.

COL. THOMAS: Paul Gignac. Help me say that, Paul.

Mr. GIGNAC: Gignac.

COL. THOMAS: Gignac.

MR. GIGNAC: I'm Paul Gignac. I'm employed here on Post. I'm slated to move -- our organization is slated to move first in this fiasco. But I notice the impact statement did not address the potential of, we'll say, family members that either own businesses here in town that will not be able to transfer with their spouses, whether it's male or female.

And also, it did not address employees that work for organizations that are not transferring off of Fort Huachuca, which means that the folks do split, working with two families, maintaining two households, in two different geographic areas. I figure that should be in the impact statement just for the simple statement that it is an impact on somebody: Us. Thank you.

COL. THOMAS: That's a tough one. We should be able to record that somewhere. Now I have another stack of people that said they might like to ask a question, or put a question mark on their card. Rather than go through those, let me just open the floor now for anyone I haven't called, or anyone else who might like to make a statement or ask a question.

MR. SMITH: My name is Larry Smith, and I'm the owner of a small company here in Sierra Vista. And I noticed I have not had an opportunity to study the draft completely. And I also listened to the statements that have been made. But one of the things that concerns me is the impact of the Information Systems Command and its major subcommand, the engineering division of the command, has traditionally over the last fifteen years had a major contractor that provides at least two to three hundred man-years of work to provide them professional and technical services. And the contract has, over that period of time, required the contractor to be within a 15-mile radius of Fort Huachuca. The impact of that contractor, and today the man-years are somewhat similar. The impact -- the impact of that, is this being considered in the Environmental Impact Statement? It's just a comment.

COL. THOMAS: We'll certainly take a look at that. There are a lot of individual impacts that are very severe, and that I certainly can identify with, but aren't documented in the EIS and really can't be. We're looking at -- it's a macro -- it's an eagle's eye view of what's going on, and a long-range projection of what the steady state might look like after this very traumatic blip that's in your future. So we haven't looked at a lot of the eaches (ph), but we'd be happy to try and see if it fits in the study. Yes, ma'am.

MS. GARCIA: I can be heard, I know, because I've spoken to larger groups. In this impact study there was a section in here on transportation at Fort Huachuca. And I'm sorry I had to laugh at that one. Because the alternative, and the thing to help, was that there's no transportation here and you're to use public transportation. And my first question was, what public transportation? We don't have any public transportation anywhere in the Sierra Vista area except for a small cab company. We don't even have a bus that comes to town any more, and they took the railroad tracks out a couple of years ago. So I'd like to know what public transportation you were talking about.

COL. THOMAS: Okay. We'll try to clean that up.

MS. GARCIA: Thank you.

COL. THOMAS: Thank you. Would you state your name again? I'm sorry.

MS. GARCIA: Barbara Garcia. Tom knows who it is.

COL. THOMAS: Is there anyone else that would like to speak? Well, I thank you very much for your time and for your interest, and for your important comments. We'll do our best to incorporate those and publish a final, and give you another chance to take a look at it in the end of June. How many of you here are employees of Information Systems Command, or somehow directly affected? There are a couple of programs specific for you that are separate from the Environmental Impact Statement, and so what I'd like to do is close this meeting now.

(Proceedings concluded at 8:05 p.m.)

* * * * *

1 UNITED STATES ARMY CORPS OF ENGINEERS
2 NEW ENGLAND DIVISION
3 Waltham, Massachusetts

4
5 PUBLIC HEARING
6 on the
7 DRAFT ENVIRONMENTAL IMPACT STATEMENT
8 for the
9 REALIGNMENT OF INSTALLATION ACTIVITIES
10 at
11 FORT DEVENS

12 Auditorium
13 Ayer Junior/Senior High School
14 Washington Street
15 Ayer, Massachusetts

16 7:00 o'clock p.m.
17 Wednesday, March 28, 1990

18 PRESENT:

19 LT. COL. STANLEY J. MURPHY,
20 Deputy Commander and Deputy Division
21 Engineer, New England Division, U.S.
22 Army Corps of Engineers

23 SUSAN E. BROWN, Environmental Impact
24 Statement Project Manager,
New England Division, U.S. Army Corps
of Engineers

COL. MIKE GOODMAN, Information Systems
Command

I N D E X

PRESENTATION BY:

PAGE

Susan Brown

8

STATEMENT BY:

Lt. Col. John Boccadori

14

Penn Lardner

17

P R O C E E D I N G S

COL. MURPHY: Good evening. I am Lieutenant Colonel Stanley J. Murphy, Deputy Division Engineer for the New England Division of the U.S. Army Corps of Engineers. My office was assigned the task of preparing the Fort Devens and Fort Monmouth portions of the Draft Environmental Impact Statement on the proposed realignment of Fort Devens, Fort Monmouth and Fort Huachuca.

With me on the podium are Sue Brown, the Environmental Impact Statement Project Manager, who prepared the Fort Devens and Fort Monmouth portions of the Draft Environment Impact Statement, and Colonel Mike Goodman, Information Systems Command Representative.

In the audience I would like to acknowledge the presence of Lieutenant Colonel Campbell, the Executive Officer for the installation, and Major Gauthier of the Intelligence School, also Mr. Dennis Robinson and Bill Clark from the Institute for Water Resources who prepared the socio-economic analysis for the EIS. The rest of the EIS team from my office is

1 also present here tonight.

2 Finally Warren Nordman from our
3 Public Affairs Office is at the back of the
4 hall. Mr. Nordman has copies of my remarks and
5 other material for members of the press.

6 As you all know, the Secretary of
7 Defense's Commission on Base Realignments and
8 Closures' December 1988 report recommends
9 consolidation of the Intelligence School, half of
10 which is presently at Fort Devens, to Fort
11 Huachuca, Arizona. It also proposes the
12 consolidation of the Information Systems Command
13 to Fort Devens from Fort Huachuca, Fort Belvoir,
14 Virginia, and Fort Monmouth, New Jersey.

15 Our purpose tonight is very
16 straightforward. We are here to listen to your
17 comments on the draft document. We welcome any
18 and all information you may have which will
19 assist us in assuring the Final Environmental
20 Impact Statement, scheduled for issue in late
21 May, is complete and addresses all potential
22 impact that the proposed realignment may cause.

23 I would like to emphasize that we
24 are not here to debate the merits of the

1 realignment itself, but rather are here to gather
2 your comments about our assessments of the
3 impacts.

4 I recognize that there may be
5 valid concerns about further adjustment at Fort
6 Devens. However, only matters directly relating
7 to the present plans for realignment are
8 appropriate at this time.

9 Comments presented here tonight
10 will be addressed in the Final Environmental
11 Impact Statement.

12 Everyone who wishes to speak or
13 submit a written statement will be afforded an
14 opportunity to do so.

15 The hearing tonight will be
16 conducted in a manner so that all who desire to
17 express their views will be given an opportunity
18 to speak.

19 To preserve the right of all to
20 express their views, I ask that there be no
21 interruption.

22 If you wish to raise any questions
23 on an issue, you may address those questions to
24 me for the record. There will be no cross

1 examination. We will try to respond to your
2 questions here tonight as best as possible.
3 However, if that is not possible, any questions
4 raised will be fully addressed in the Final
5 Environmental Impact Statement.

6 I would like to remind you of the
7 importance of filling in the cards that were
8 available at the door. These cards serve two
9 purposes. First, they let us know that you are
10 interested in this action so that we can keep you
11 informed. Second, they give me a list of those
12 who wish to speak tonight. If you did not
13 complete a card, please raise your hand and one
14 will be provided to you.

15 Is there anybody who did not get a
16 card or who did not fill one out? Just that one
17 person, Warren. Anybody else?

18 (No response.)

19 COL. MURPHY: The record of this
20 hearing will remain open until 15 April. Written
21 comments submitted to me tonight or by mail prior
22 to this date will receive equal consideration
23 with oral statement made this evening.

24 If there are no objections, I will

1 dispense with the reading of the public notice
2 and have it entered into the record. Are there
3 any objections?

4 (No response.)

5 COL. MURPHY: I will dispense with
6 the reading of the notice.

7 A transcript of this hearing is
8 being made to assure a detailed review of all of
9 your comments. A copy of this transcript will be
10 available at our Waltham office for your review,
11 or you may make arrangements with the
12 stenographer, up here in front, for a copy at
13 your own expense.

14 When making a statement, please
15 come forward to the microphone and state your
16 name and the interest you represent. If you
17 speak as an individual, please say so.

18 I want to emphasis that all who
19 wish to speak will then have an opportunity to do
20 so.

21 Next, Sue Brown of my staff will
22 outline the environmental impact statement
23 process and some of the many impacts addressed in
24 this draft statement.

1 PRESENTATION BY SUSAN BROWN,
2 ENVIRONMENTAL IMPACT STATEMENT PROJECT MANAGER,
3 U.S. Army CORPS OF ENGINEERS

3 MS BROWN: Thank you, Colonel
4 Murphy, and good evening.

5 In the next few minutes, I'd like
6 to briefly discuss the Corps involvement in the
7 environmental documentation for the proposed
8 realignment here at Fort Devens, as well as a
9 review of the EIS process, the EIS schedule and
10 some general conclusions and findings of the
11 Draft Environmental Impact Statement. Some of
12 this maybe be familiar to those who may have
13 attended the scoping session back in June of last
14 year. And it is also described in the fact
15 sheet that you receive at the registration table
16 as you came in this evening.

17 As Colonel Murphy just stated, the
18 Secretary of Defense established the Base
19 Realignment and Closure Commission on May 3rd,
20 1988, to recommend realignment and closure of
21 military installations within the United States,
22 its commonwealths, territories and possessions.
23 The Defense Authorization Amendments and Base
24 Closure and Realignment Act, or Public Law

1 100-526, authorized these realignments and
2 closures.

3 The Commission presented its
4 specific recommendations to the Secretary of
5 Defense in December of 1988. The Commission then
6 recommended the consolidation of the Army
7 Intelligence School at Fort Devens with the
8 Headquarters, Army Intelligence Center and School
9 at Fort Huachuca, Arizona.

10 The Commission also recommended
11 the relocation of the Army Information Systems
12 Command from Fort Huachuca to Fort Devens.
13 Elements of this command would also transfer to
14 Fort Monmouth, New Jersey, and Fort Velvoir,
15 Virginia.

16 The Base Closure and Realignment
17 Act requires that the Army must consider the
18 environmental consequences of implementing the
19 proposal relative to the National Environmental
20 Policy Act, better known as NEPA. The Draft
21 Environmental Impact Statement, or EIS, was
22 prepared to provide an analysis of the physical,
23 biological and socio-economic impacts associated
24 with the implementation of the proposed

1 realignment.

2 I've shown her on this slide some
3 of the major steps in the NEPA process. The
4 Corps of Engineers held scoping sessions at the
5 same location on June 8 of last year. The
6 concerns voiced at those sessions helped us to
7 key in on the most important issues addressed in
8 this document. We then did our hands-on work to
9 collect background information, analyze data and
10 prepare the Draft EIS for public distribution.
11 And the Corps is now holding public hearings. A
12 hearing was held last week on March 21st in
13 Sierra Vista, Arizona, the community adjacent to
14 Fort Huachuca.

15 After the end of the 45-day public
16 comment period on April 15, 1990, we will then
17 make appropriate revisions to the EIS
18 incorporating oral comments we receive here this
19 evening as well written comments. The Final EIS
20 will then then be available for a 30-day public
21 review.

22 Finally, a Record of Decision, or
23 ROD. on the proposed action will then be
24 prepared. A Record of Decision is a document

1 prepared at Headquarters, Department of the Army,
2 to state how the realignment will be carried out
3 considering the impacts addressed in the EIS.

4 Shown on this slide is the
5 schedule for the EIS from this point in time on.
6 The draft EIS was distributed in February for
7 45-day public review. We're now having our
8 public hearings. The final EIS is scheduled for
9 release in June, and the Record of Decision is to
10 be signed on 16 July. And that date is the date
11 for the signature of the Record of Decision so
12 that the construction contracts can be awarded on
13 schedule.

14 I've noted on this slide some
15 general conclusions and findings of the EIS,
16 shown by installation. For Fort Devens, the
17 effects of the proposed realignment are on the
18 beneficial side. Positive impacts to the
19 socio-economic environment, such as regional
20 income and housing, are expected to be beneficial
21 because of the transfer of many higher paying
22 civil positions to the area. Impacts to the
23 school system are not considered to be
24 significant. And there will be no adverse

1 construction impacts, and no significant impacts
2 to historic resources.

3 At Fort Huachuca, potential
4 impacts to biological resources are anticipated
5 because of increased range of use at that
6 installation. The EIS also concluded that there
7 will be adverse economic and social impacts
8 surrounding Huachuca associated with the loss of
9 civilian positions and addition of military
10 positions. There will also be negative impacts
11 to the housing market the that area.

12 And, finally, there will be no
13 significant impacts in the Fort Monmouth area.

14 That concludes my overview of the
15 EIS process. I'd like to thank you all for being
16 here this evening, and I will now turn the
17 meeting back over to Colonel Murphy.

18 COLONEL MURPHY: Thank you, Sue.

19 We will now receive your comments
20 I'd like to reiterate that oral and written
21 statements received tonight or written statements
22 received later will receive equal consideration.
23 Therefore, I ask that lengthy statements be
24 summarized verbally and the entire statement

1 submitted for the record.

2 I also ask that youf constrain
3 your comments to the matters that are with us
4 tonight that are pertinent to the EIS.

5 I would first like to start off
6 with the members of Congress or their
7 reopresentatives. And I'd like to recognize Randy
8 Goguen from Congressman Chester Atkins' office.
9 Did I pronounce that correctly?

10 MR. GOGUEN: That's correct.

11 COLONEL MURPHY: Are there any
12 other representatives of Congress or their
13 representatives here tonight who would like to
14 make a statement?

15 (No response.)

16 COL. MURPHY: Anybody from the
17 Governors office present?

18 (No response.)

19 COL. MURPHY: Any other elected
20 state officials?

21 (No response.)

22 COL. MURPHY: Any local elected
23 officials?

24 (No response.)

1 COL. MURPHY: I have one
2 representative of a federal agency, Lt. Col. John
3 Boccadori, 94th ARCOM, Hanscom Air Force Base.
4 Would you like to make a statement this evening,
5 sir?

6 COL. BOCCADORI: Yes, I would.

7 COLONEL MURPHY: The microphone
8 is RIGHT up here to your right.

9 STATEMENT OF LT. COLONEL JOHN BOCCADORI,

10 94TH ARCOM, HANSCOM AIR FORCE BASE.

11 COL. BOCCADORI: We're at the 94th
12 ARCOM, Engineer.

13 We at the 94th ARCOM, after
14 reading this book, have some very great concerns
15 in reference to the change in mission for Fort
16 Devens, which is now a FORSCOM installation, into
17 Information Systems Command. At the base closure
18 meeting, the magic word, almost every other word
19 out of Major General Scaff's mouth in the
20 briefing was reserve components in New England.

21 The impact statement here draft
22 environmental statement does mention the fact
23 that this is the only Army base in New England.
24 One of the members of the committee, the base

1 closure committee, his being from New England has
2 helped this area. He has addressed the point of
3 what else can be put at Fort Devens to save Fort
4 Devens. The Information Systems Command being
5 placed at Fort Devens is a good decision. But we
6 are concerned on the reserve side of the house,
7 the fact that there are a lot of troops in the
8 six New England states. We want to make sure
9 Fort Devens realizes that they are responsible
10 for the six state of New England, not just up to
11 the fence line.

12 Going through this impact study,
13 we are trying to find out if the money that's
14 here for the civilian payroll and for the
15 military payroll includes the reserve forces, the
16 HUR forces, and the impact that they provide in
17 the local b-state area. We don't know if that's
18 addressed in this or not.

19 The other thing is when they move
20 the 2000 military people outside of the Fort
21 Devens, will that change the status of the Cutler
22 Army Hospital to become a clinic, because in here
23 addresses the fact that Pease is going out of
24 business, and Newport. But there is a magic

1 number somewhere, that if you go below a certain
2 number of military positions, then you revert to
3 a clinic status. And this may affect all of New
4 England because we're talking about not only
5 what's on Fort Devens but the entire 6-state
6 area.

7 As I said previously, I have noted
8 in this book several pages which we are concerned
9 with, and I'll put them in writing. But
10 basically we want to make sure that Fort Devens
11 continues the support that they have given us in
12 the past. They have been a great support for the
13 reserve components in New England. We want to
14 make sure that mission continues, because there
15 are a total of 64 locations off this installation
16 that they are responsible for, 8 on post and 64
17 off post in the six states.

18 I'll finalize that and put in a
19 writing.

20 COL. MURPHY: Okay, fine. We'd
21 appreciate that, Col. Boccadori. Although we
22 have a stenographer, I'd like to make sure we get
23 the essence of your comments, and we'll make sure
24 they are addressed in the Final EIS. Thank you.

1 Are there any other
2 representatives of federal agencies who would
3 like to speak tonight?

4 (No response.)

5 COL. MURPHY: Any representatives
6 of state agencies?

7 (No response.)

8 COL. MURPHY: Next I have a Penn
9 Lardner from the Ayer High School. Did I
10 pronounce that correctly?

11 STATEMENT OF PENN LARDNER, AYER HIGH SCHOOL

12 MR. LARDNER: My name is Penn
13 Lardner. I am an Ayer resident and I'm a teacher
14 here at the high school. I'm also a member of
15 the Ayer Regionalization School Committee. I was
16 here at the scoping session and asked some
17 questions about the impact of students coming
18 in.

19 I'd like to make reference to
20 Table 4.3-2 found on page 82 and at the same time
21 I'd like to make reference to 4.3.2.5 listed
22 schools on page 89.

23 On the Table 4.3-2 it talks about
24 information systems people coming and going. We

1 obviously are losing a number of people on the
2 post, and being replaced for civilians.

3 Obviously that's an enormous amount of civilians
4 coming in for jobs opening for civilians, none of
5 which are demanded to send their kids to Ayer
6 High School. 2000 people or 2100 can choose what
7 places they want their kids to be educate. I
8 think the impact is far greater than the numbers
9 might indicate.

10 I think it also is a possibility
11 that education, an impact on education locally is
12 something the military probably doesn't have a
13 good handle on, because obviously it's not their
14 bailiwick. But I'm just saying that that's an
15 enormous drop, and to try to hopefully expect, as
16 you mentioned in the other area there, civilian
17 people will send their kids to Ayer High School I
18 think is pie in the sky.

19 Two things on the page 89.

20 Approximately 70 percent of the Ayer school
21 system enrollment is accounted for by dependents
22 of Devens military. Quite obviously that's going
23 to go down dramatically. If you only have 900
24 people living on post and 2100 people that you

1 are replacing that now have an opportunity to go
2 anywhere they want, we're going to be devastated,
3 I think, by that kind of situation. Again
4 neither of us knows what the answer is go going
5 to be, but I just feel it probably will be to our
6 detriment.

7 176 children doesn't sound like a
8 lot, but it is. It's a tremendous impact,
9 especially since we're going through a tremendous
10 problem right now. We lost 14 teachers last
11 year. We're now in the process of losing four
12 more, and if we don't have an override, we'll
13 lose approximately 23. So you're now in the
14 range of about 30 or 40 teachers could be
15 possibly gone in this last 2-year period of
16 time. With the loss of kids, that is obviously a
17 big problem.

18 We just recently have been able to
19 have the Town of Shirley, which sends kids to our
20 school, fortunately not have to go to
21 regionalized with Lunenburg, and therefore those
22 kids are still available here. But there again
23 still numbers are going down, and the quality of
24 Ayer High School will be affected.

1 Now I'm assuming that the military
2 has made a choice to go with Ayer because they
3 feel the school system is a good school system,
4 and obviously with all this stuff that's going
5 on, you know, Devens may want to rethink that
6 because they may not have a good school here.
7 And of course all the schools are have the same
8 problem.

9 We're proud of our school, and we
10 don't want to see it go down. And obviously if
11 the numbers are incorrect, then this can be a
12 problem. And I just want to basically bringing
13 it to your attention that not all is, you know,
14 hunky-dory like it seems to be presented.

15 The the last thing I'd like to say
16 it says Public Law 81-874 entitlements are
17 anticipated to climb by .6 million, 0.6 million
18 dollars, from 4.2 million to 3.6 million. I'm
19 not an expert on 874 but I question those
20 numbers.

21 My last figure we're going in with
22 this budget at this particular school year is \$3
23 million, and we have been down as low as 2.8 the
24 last couple of years. I gather that the 874

1 money is done every -- it's two years behind
2 based on certain formulae. And I gather that the
3 formula or the amount of money that's coming to
4 our school system has been frozen, and we're not
5 going to get the 3.6 or the 4.2. It's been a
6 real bone of contention that Ayer has not being
7 getting its fair share of 874 money. The
8 government says the Town of Ayer is not paying
9 its fair share. That's because the way it has
10 been presented in the past, that Ayer uses 37
11 percent of its budget, town budget on education.
12 When in fact it's roughly 70 percent.

13 This is just recently been
14 changed. We've had people down from Washington
15 talking, and they are going to give us another
16 look for the 3D2B money, which is an additional
17 money factor that comes out of 874. We need all
18 the help we can get. We are being definitely
19 short changed in the PL-874 money for whatever
20 reason. I gather the pie is bigger now in 874
21 than it used to be when it was first establish.

22 But I would question that 4.2
23 million to 3.6 million. I don't think that is
24 accurate. And I think those figures may be

1 anywhere from four to five years old. We are, I
2 believe, in the present budget figuring on \$3
3 million, and 3.6 doesn't sound like a lot but it
4 is a lot, especially since we're losing
5 teachers.

6 I have talked to Susan on the
7 telephone, and Bill mentioned some figures, and
8 Susan said that maybe the figures were not
9 accurate. I don't know which figures are which,
10 but I would like to know if we could put some
11 more time and effort into this before the final
12 to definitely maybe give the Ayer school system a
13 better standing.

14 The reason I'm here is because
15 we're trying to regionalize with Shirley because
16 we need to keep this school system together so
17 that it does provide fine quality for Devens kids
18 as well as the Ayer and Shirley communities.
19 Thank you.

20 COL. MURPHY: I can guaranty that
21 your comments will be given more time and
22 appropriate recognition in the Final.

23 Are there any representatives of
24 local agencies that would like to speak?

1 (No response.)

2 COL. MURPHY: I would like to now
3 open it to the general public, and the only card
4 I have is Mr. Jack Spillane.

5 MR. SPILLANE: I defer.

6 COLONEL MURPHY: You defer?

7 That is all the cards I have for
8 the people who would like to ask questions
9 tonight. Is there anybody else who has not
10 filled out a card who right now has a question
11 that comes to mind? You're more than welcome to
12 ask it now.

13 (No response.)

14 COLONEL MURPHY: Okay. I would
15 like to repeat again that if you have second
16 thoughts or friends or neighbors asking questions
17 or something comes to mind that written
18 statements may be submitted to our office up
19 until the 15th of April. These written
20 statements received up until that time as well as
21 anything received here tonight will be given
22 equal consideration and will be fully addressed
23 in the Final Environmental Impact Statement.

24 We'd like to extend our

B-111

1 appreciation to the Ayer School Department for
2 the use of this fine facility tonight. We have
3 heard your statements, and I can assure you that
4 they will be fully addressed in the Final Impact
5 Statement. Thank you very much.

6 (Whereupon, at 7:25 p.m. the
7 public hearing was concluded.)
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

APPENDIX C
SOCIOECONOMIC EFFECTS ANALYSES

TABLE OF CONTENTS

	<u>Page</u>
Phase II SEA Report - Socioeconomic Impacts at Fort Huachuca	C-1
Phase II SEA Report - Socioeconomics Impacts at Fort Devens	C-20
Phase II SEA Report - Socioeconomic Impacts at Fort Monmouth	C-39

**PHASE II
SEA REPORT
SOCIOECONOMIC EFFECTS
ANALYSIS**

HUACHUCA/DEVENS RELATED BRACO ACTIONS

**SOCIOECONOMIC IMPACTS
AT FORT HUACHUCA**

**REVISED
19 April 1990**

SEA TEAM

Dennis P. Robinson	Project Manager
<i>Economist at the Institute for Water Resources</i>	
Morris W. Clark, Jr.	Associate Project Manager
<i>Economist at the Institute for Water Resources</i>	
Kim M. Bloomquist	Assistant Project Manager
<i>Economist at Savannah District</i>	
Ian McDevitt	Assistant Project Manager
<i>Economist at Memphis District</i>	
Edwin J. Rossman	Assistant Project Manager
<i>Social Scientist at Tulsa District</i>	

**HUACHUCA/DEVENS RELATED BRACO ACTIONS
SOCIOECONOMIC IMPACTS
AT FORT HUACHUCA**

EXECUTIVE SUMMARY

Fort Huachuca is scheduled for Realignment that is to be completed by the last quarter of FY 1994 in connection with the recommended realignment at Fort Devens in order to consolidate the split Intelligence School training function and Information Systems Command (ISC). The Intelligence School, currently located at Fort Devens, will relocate to Fort Huachuca. The Headquarters, Information Systems Command will relocate from Fort Huachuca to Fort Devens. Other ISC activities at Fort Monmouth and Fort Belvoir will also relocate to Fort Devens. This action covers the move of the Information Systems Command activities from Fort Huachuca to Fort Devens.

Using data provided by the Major Commands, installations, Engineer Districts, and other sources, the SEA team estimates of the primary and secondary regional socioeconomic impacts of the BRAC realignment actions, relevant to Fort Huachuca, are shown below:

- A net total of 900 permanent employees (1,210 civilians will leave and 310 military will enter) will leave Fort Huachuca, thereby precipitating an annual \$82.1 million decrease in total regional wages and salaries. The number of military trainees will increase by 1,674 (average daily load). It is estimated that trainees wages and salaries will increase by \$18.0 million. This total increase in regional purchasing power from all sources will be augmented by \$129.0 million in realignment-associated construction and by \$52.8 million in one-time expenditures. The number of personnel holding second jobs and working dependents is expected to decrease by 689 full-time positions and their wages and salaries will decrease by \$9.7 million.
- During the realignment period, all actions at Fort Huachuca are expected to decrease regional sales volume by \$68.6 million, increase regional employment by 51 person-years, and decrease regional income by \$36.5 million. A net total of 774 employees (1,210 civilians will leave and 1,984 military will enter) will enter the Fort Huachuca area as a result of the Huachuca/Devens realignment. The actions at Fort Huachuca are expected to result in a 879-person decrease in regional population. The total decrease in regional population will include a decrease in persons living off-post of 2,550 and a decrease in children attending public schools of 567, some of whom also live off-post. There will be a 731-unit decrease in the total number of occupied housing units within the region (667 owner-occupied units and 64 renter-occupied units). In conclusion, the region's general economic activity will definitely decrease. Based on the analyses of all actions at Fort Huachuca, the SEA Team concludes that these "short-term" attendant socioeconomic effects of those actions MAY BE significant.

- After the realignment period, all actions at Fort Huachuca are expected to decrease regional sales volume by \$90.6 million, decrease regional employment by 445 person-years, and decrease regional income by \$41.9 million. These impacts are larger after the realignment period because the "short-term" socioeconomic effects of construction and one-time expenditures will have diminished. A net total of 774 employees (1,210 civilians will leave and 1,984 military will enter) will enter the Fort Huachuca area as a result of the Huachuca/Devens realignment. The actions at Fort Huachuca are expected to result in a 1,348-person increase in regional population. The total decrease in regional population will include a decrease in persons living off-post of 2,550 and a decrease in children attending public schools of 567, some of whom also live off-post. There will be a 898-unit decrease in the total number of occupied housing units within the region (667 owner-occupied units and 64 renter-occupied units). In conclusion, the region's general economic activity will definitely decrease. Based on the analyses of all actions at Fort Huachuca, the SEA Team concludes that these "long-term" attendant socioeconomic effects of those actions MAY BE significant.

1. INTRODUCTION

The socioeconomic analysis part of the overall study was undertaken to provide the socioeconomic input to the environmental documentation required by the National Environmental Protection Act (NEPA) of 1969. The analyses, findings, and discussions contained in this report are to be used in the preparation of the required NEPA documentation of the socioeconomic impacts of the base closure and realignment actions recommended by the Defense Secretary's Commission on U.S. Army Base Realignments and Closures.

The U.S. Army Base Realignment and Closure Office (BRACO) assigned to the U.S. Army Engineer District, Mobile, Alabama, the task of coordinating the preparation of the required environmental impact statements and assessments. As part of the staff assigned to this environmental evaluation, the BRACO Socioeconomic Effects Analysis (SEA) Team was formed to conduct studies addressing the social and economic impacts of all recommended realignment and closure actions.

This report discusses the Realignment of Fort Huachuca within the following framework:

- background
- impacts
- analysis
- significance

2. BRACO ACTION: REALIGNMENT OF FORT HUACHUCA

The Realignment of Fort Huachuca is scheduled to be completed by the last quarter of FY 1994. Fort Huachuca is scheduled for realignment in connection with the recommended realignment at Fort Devens in order to consolidate the split Intelligence School training function and Information Systems Command (ISC). The Intelligence School, currently located at Fort Devens, will relocate to Fort Huachuca. The Headquarters, Information Systems Command will relocate from Fort Huachuca to Fort Devens. Other ISC activities at Fort Monmouth will also relocate to Fort Devens. This action covers the move of the Information Systems Command activities from Fort Huachuca to Fort Devens.

2.1. DESCRIPTION OF AFFECTED INSTALLATION

- (1) **Mission** Fort Huachuca opened in 1877 and was named after Huachuca ("place of thunder") Mountains. Fort Huachuca is the home of Headquarters Army Information Systems Command, Intelligence Center and School, Army Electronics Proving Ground, Information Systems Engineering Command, 11th Signal Brigade, and the Joint Test Element of Joint Tactical C3 Agency. The fort is located 75 miles southeast of Tucson AZ on 73,000 acres.

- (2) **Demography** As of July 1989, the Fort Huachuca total population of 10226 persons consisted of 6,644 military personnel and 3,582 civilian personnel. It is estimated that 28.0 percent of the military personnel reside on-post.

2.2. CHANGES AT FORT HUACHUCA

The realignment of Fort Huachuca will be analyzed in terms of the changes that those actions induce in the following three elements: personnel, post expenditures, and realignment-associated construction (see Table I). Those changes will affect, in turn, the socioeconomic conditions in the surrounding region. For Fort Huachuca, the realignment-induced changes in the three elements are summarized below.

Intelligence School: Fort Devens to Fort Huachuca

- (1) **Personnel** Permanent party military personnel will increase by 1098 and civilian personnel will increase by 265. Approximately 20.0 percent of the affected military personnel live on-post. It is estimated that military wages and salaries will increase by \$24.3 million and civilian wages and salaries will increase by \$8.4 million.
- (2) **Post Expenditures** Post expenditures for goods, services, supplies and materials are expected to increase by \$16.3 million due to the realignment action.
- (3) **Military Students and Trainees** The number of military trainees will increase by 1,674 (average daily load). It is estimated that student wages and salaries will increase by \$18.0 million.
- (4) **Second Jobs and Working Dependents** A portion of the affected permanent military and civilian personnel and their dependents hold employment outside their military-related jobs.¹ Due to the changes in personnel at Fort Huachuca the number of civilian and military personnel holding second jobs will increase by 55 full-time jobs and the number of working dependents is expected to increase by 588 person-years. These job changes will increase regional wages and salaries by \$7.9 million.

¹ Based on an Air Force survey of personnel and their dependents there are 4 full-time second-job positions per 100 military and civilian personnel at an average annual salary of \$14,181. In addition, there are 38.2 full-time positions held by dependents per 100 military personnel at an average annual salary of \$11,442 and 63.8 full-time positions held per 100 civilian personnel at an average annual salary of \$13,727. (William D. Gunther. Socioeconomic Survey of Air Force Employees. Report prepared for Headquarters Engineering Services Center, Directorate of Environmental Planning, 13 November 1982).

Information Systems Command: Fort Huachuca to Fort Devens

- (1) **Personnel** Permanent party military personnel will decrease by 788 and civilian personnel will decrease by 1,475. Approximately 28.0 percent of the affected military personnel live on-post. It is estimated that military wages and salaries will decrease by \$20.7 million and civilian wages and salaries will decrease by \$61.4 million.
- (2) **Post Expenditures** Post expenditures for goods, services, supplies and materials are expected to decrease by \$40.5 million due to the realignment action.
- (3) **Military Students and Trainees** There are no changes in the number of trainees and military students.
- (4) **Second Jobs and Working Dependents** A portion of the affected permanent military and civilian personnel and their dependents hold employment outside their military-related jobs. Due to the changes in personnel at Fort Huachuca the number of civilian and military personnel holding second jobs will decrease by 90 full-time jobs and the number of working dependents is expected to decrease by 1,242 person-years. These job changes will decrease regional wages and salaries by \$17.6 million.

Construction and One-Time Expenditures

- (1) **Construction** Realignment-associated construction expenditures will be \$127.0 million.
- (2) **One-Time Expenditures** Realignment activities in the Fort Huachuca area for housing assistance and other costs will mean a one-time expenditure of \$52.8 million.

3. IMPACTS OF THE REALIGNMENT OF FORT HUACHUCA

Military installations undergoing realignment actions are parts of the overall social and economic fabric (situation) of the regions in which they are located. For Fort Huachuca, the existing socioeconomic situation of both the installation and its associated region are described below.

3.1. DESCRIPTION OF AFFECTED REGION

The demographic and economic parameters for the region are listed in detail in Appendix I. The most relevant information underlying the data in Appendix I is discussed in the following paragraphs.

- (1) **Regional Definition** In this report, the term "region" is defined as the geopolitical area (a conglomerate of counties and other municipalities) which is expected to experience significant socioeconomic effects that are induced by the realignment actions at Fort Huachuca. Therefore, the Engineer District responsible for preparation of the environmental assessment of the Fort Huachuca realignment actions has stipulated that the relevant region for Fort Huachuca should include Cochise County, Arizona. This region encompasses an area of 6,218 square miles.
- (2) **Demography** The 1980 regional population, according to the 1980 Census, was 85,686. The estimated 1989 regional population is 101,263. Between 1980 and 1989, regional population increased by 18.2 percent. The 1994 regional population is projected to be 108,737.
- (3) **Economic Activity** An analysis of average annual data indicates that the 1988 civilian labor force was 34,895. In 1989, the largest employing industrial sector is Federal Govt. which employs 30.8 percent of the total employed labor. The regional unemployment rate is now 8.6 percent. It is estimated that 25.9 percent of the total civilian employed labor force in the region is directly employed at Fort Huachuca. The 1989 regional per capita income is \$10,320. The 1994 regional per capita personal income is projected to be \$12,885. The regional total personal income was \$1,036.9 million in 1987.
- (4) **Housing** The 1980 Census shows a regional total of 32,297 housing units, and a regional housing vacancy rate of 10.3 percent.

3.2. ESTIMATED SOCIOECONOMIC IMPACTS

The BRACO study managers and the BRACO SEA Team have concurred in the decision to use the Construction Engineering Research Laboratory (CERL) Economic Impact Forecasting System (EIFS) model to quantify the socioeconomic impacts associated with the recommended realignment actions. The outputs of the EIFS model are discussed herein in terms of changes (losses or gains) within the region where a realignment-associated installation is located.

Impacts (regional losses or gains) associated directly with alignment actions are considered to be primary impacts. Primary impacts include the changes in the following parameters: personnel employed at the installation, their salaries, procurement, and the initial expenditures of realignment-associated construction. Secondary impacts are those effects induced by the initial (primary) impact; for example, a decrease (change) in the regional demand for goods and services that is associated with a regional decrease (change) in the number of persons earning wages and salaries. In this case, the change (decrease) in demand is the secondary impact that was induced by the primary impact which is the change (decrease) in the number of actual or potential purchasers (persons earnings wages and salaries). Total impacts for a region include all of the primary and secondary impacts within that region. A detailed discussion of the EIFS model follows at the end of this

appendix. A listing of all of the outputs of the EIFS model is provided in Tables II through VIII.

Intelligence School: Fort Devens to Fort Huachuca

- (1) **Realignment Economic Impacts** The realignment actions will result in an increase (gain) in the sales volume for regional merchants of \$52.3 million. The primary and secondary impacts will result in a 2,074 person-year increase in regional employment, and a \$39.9 million increase in regional income.
- (2) **Military Student and Trainee Economic Impacts** The total primary and secondary impacts of the change in the number of military trainees will result in the regional sales volume increasing by \$8.5 million, regional employment increasing by 1789 person-years, and regional personal income increasing by \$19.1 million.
- (3) **Second Jobs and Working Dependents Economic Impacts²** The total primary and secondary impacts of the change in the number of personnel holding second jobs and working dependents will result in increasing regional sales volume by \$9.4 million, increasing regional employment by 770 person-years, and increasing regional personal income by \$9.2 million.

Information Systems Command: Fort Huachuca to Fort Devens

- (1) **Realignment Economic Impacts** The realignment actions will result in a decrease (loss) in the sales volume for regional merchants of \$151.4 million. The primary and secondary impacts will result in a 4,318 person-year decrease in regional employment, and a \$102.7 million decrease in regional income.
- (2) **Military Student and Trainee Economic Impacts** There are no student or trainee related impacts.

² The SEA Team has opted to not include these impacts with the total regional impacts of this action because their inclusion is considered to be technically and conceptually open to question. While personnel holding second jobs and their working dependents are acknowledged to generate economic effects that are an additional dimension of this impact analysis, the exclusion of such impacts is predicated on the assumption that the affected workers either hold positions that are already part of the estimated secondary impacts attributable to the BRACO action or are employed by firms in which production decisions contingent upon sources of demand that are not associated with the BRACO action (i.e., it is assumed that these affected workers will be replaced if they leave their positions). Consequently, the SEA Team estimates and shows these impacts in a separate table.

- (3) **Second Jobs and Working Dependents Economic Impacts** The total primary and secondary impacts of the change in the number of personnel holding second jobs and working dependents will result in decreasing regional sales volume by \$20.9 million, decreasing regional employment by 1,616 person-years, and decreasing regional personal income by \$20.5 million.

Construction and One-Time Expenditures

- (1) **Construction Economic Impacts³** All construction impacts will occur during the construction period of 1991 through 1994. The total primary and secondary impacts of realignment-associated construction will result in the regional sales volume increasing by \$11.7 million, regional employment increasing by 356 person-years, and regional personal income increasing by \$5.8 million.
- (2) **One-Time Expenditure Economic Impacts⁴** All one-time expenditure impacts will occur during the construction period of 1991 through 1994. The total primary and secondary impacts of realignment-associated one-expenditures will result in the regional sales volume increasing by \$10.3 million, regional employment increasing by 140 person-years, and regional personal income increasing by \$1.4 million.

Summary of Socioeconomic Impacts

During the period of realignment, all actions at Fort Huachuca are expected to decrease regional sales volume by \$68.6 million, decrease regional employment by 278 person-years, and decrease regional income by \$41.9 million. A net total of 774 employees (1,210 civilians will leave and 1,984 military will enter) will enter the Fort Huachuca area as a result of the Huachuca/Devens realignment. The actions at Fort Huachuca are expected to result in a 879-person decrease in regional population. The total increase in regional population will include a decrease in persons living off-post of 2,550 and a decrease in children attending public schools of 567, some of whom also live off-post. In addition,

³The impacts of construction are analyzed on an annual-average basis, starting FY 1991 through the completion of the subject BRACO action. For example, a BRACO action commencing FY 1991 and ending in FY 1994 will have construction expenditures occurring over a four-year period. Not knowing the actual temporal pattern of these expenditures, the SEA Team assumed that they would occur on an annual-average basis.

⁴The impacts of one-time expenditures are analyzed on an annual-average basis, starting FY 1991 through the completion of the subject BRACO action. For example, a BRACO action commencing FY 1991 and ending in FY 1994 will have one-time expenditures occurring over a four-year period. Not knowing the actual temporal pattern of these expenditures, the SEA Team assumed that they would occur on an annual-average basis.

there will be a 731-unit decrease in the total number of occupied housing units within the region (231 owner-occupied units and 667 renter-occupied units). In conclusion, the region's general economic activity will definitely decrease.

After the period of realignment, all actions at Fort Huachuca are expected to decrease regional sales volume by \$90.6 million, decrease regional employment by 455 person-years, and decrease regional income by \$41.9 million. These impacts are larger after the realignment period because the "short-term" socioeconomic effects of construction and one-time expenditures will have diminished. A net total of 774 employees (1,210 civilians will leave and 1,984 military will enter) will enter the Fort Huachuca area as a result of the Huachuca/Devens realignment. The actions at Fort Huachuca are expected to result in a 1,348-person increase in regional population. The total increase in regional population will include a decrease in persons living off-post of 2,550 and a decrease in children attending public schools of 567, some of whom also live off-post. In addition, there will be a 731-unit decrease in the total number of occupied housing units within the region (667 owner-occupied units and 64 renter-occupied units). In conclusion, the region's general economic activity will definitely decrease.

4. SIGNIFICANCE OF REALIGNMENT OF FORT HUACHUCA

The significance of these impacts may be evaluated by a variety of criteria. Significance in this analysis is viewed in terms of the overall change in regional conditions. Significance is also determined by gauging the economic resiliency of a region in terms of threshold values representing the maximum of historic variation (the Rational Threshold Value method) and by evaluating the "normal" fluctuations experienced by the region (the Forecast Significance of Impacts procedure). These methods compare the impacts of a proposed action to the historic fluctuations experienced by the region. The details of those methods and a table exhibiting criteria for the testing of significance are found in Appendix II, while the information used to evaluate the significance of the impacts are found in Tables IX and X.

The expected changes in regional sales volume, employment, income, and population within the Fort Huachuca area during the realignment process represent 10.1%, 0.1%, 3.5%, and 1.3% of their 1987 levels, respectively. Based on the analyses of all actions at Fort Huachuca, the SEA Team concludes that the attendant socioeconomic effects of those actions MAY BE significant.⁵

The expected changes in regional sales volume, employment, income, and population within the Fort Huachuca area after the realignment phase represent 13.4%, 1.1%, 4.1%, and 1.3% of their 1987 levels, respectively. Based on the analyses of all actions at Fort Huachuca,

⁵ The expected change in regional sales volume exceeds both the RTV and FSI criteria for significance.

the SEA Team concludes that the attendant socioeconomic effects of those actions MAY BE significant.⁶

5. RELATED ACTIONS AT OTHER INSTALLATIONS

The Realignment of Fort Huachuca will necessitate changes in personnel at Forts Devens and Monmouth.

⁶ The expected change in regional sales volume exceeds both the RTV and FSI criteria for significance.

TABLE I

MAJOR PERSONNEL CHANGES AT INSTALLATIONS AFFECTED BY REALIGNMENT OF FORTS HUACHUCA, DEVENS, AND MONMOUTH

REVISED: 19 APRIL 1990

	FORT HUACHUCA (subtractions)	FORT HUACHUCA (additions)	FORT DEVENS (subtractions)	FORT DEVENS * (additions)	FORT MONMOUTH (subtractions)	
EXPENDITURE CHANGES	(\$40,500)	\$16,300	(\$3,435)	\$82,500	(\$37,600)	
CIVILIAN PERSONNEL						
Number	-1475	265	-318	2131	-331	
Wages & Salaries	\$41,630	\$31,794	\$31,794	\$42,742	\$43,014	
MILITARY PERSONNEL						
Number	-788	1098	-1284	930	-74	
Wages & Salaries	\$26,297	\$22,159	\$22,159	\$28,964	\$31,294	
% On-Post	28%	20%	87%	95%	86%	
BRACO CONSTRUCTION	\$0	\$32,300	\$0	\$20,000	\$0	
ONE-TIME EXPENDITURES	\$0	\$6,412	\$0	\$25,250	\$675	
MILITARY STUDENTS						
Number	0	0	0	0	0	
Wages & Salaries	\$0	\$0	\$0	\$0	\$0	
% On-Post	0%	0%	0%	0%	0%	
MILITARY TRAINEES						
Number	0	-1674	-1674	0	0	
Wages & Salaries	\$0	\$10,733	\$10,733	\$0	\$0	
% On-Post	0%	90%	90%	0%	0%	
TOTAL OTHER JOBS						
Number	-1333	643	-757	1837	-256	
Wages & Salaries	\$13,242	\$12,275	\$12,286	\$13,315	\$13,503	

NOTE: All amounts of money, except wages and salaries, are in thousands of dollars. Wages and salaries are means expressed in dollars. "Total Other Jobs" is applicable to civilian and military personnel and their resident family members.

SOURCE: Data supplied by the Major Commands responsible for the affected installations. N.A. means not available.

* Includes 347 civilian and 79 military positions from Fort Belvoir as shown on Figure 2.2-1 (main text) and described in Section 4.3.2.2 (main text).

NOTE: Dollar amounts are annualized for the BRAC realignment and construction period (1990-1994).

TABLE II
ECONOMIC IMPACT FORECAST SYSTEM
INTELL SCHOOL ENTER FORT FORT HUACHUCA
REALIGNMENT IMPACTS

COUNTY LIST: # FIPS# County
 = ===== =====
 1 04003 cochise, az

INPUT PARAMETERS

Deflators: (EIFS default deflators were used)
 (price deflator for baseline year (ex b.v.)): 100.00
 (price deflator for output (ex b.v.)): 122.60
 (price deflator for baseline year (BV)): 100.00
 (price deflator for output (BV)): 112.20
 Change in expenditures for local services and supplies: \$16,300,000
 (price deflator): 112.20
 Change in civilian employment: 265.00
 Average income of affected civilian personnel: \$31,794
 (price deflator): 122.60
 Percent of affected civilian personnel expected to relocate: 100.0%
 Change in military employment: 1098.00
 Average income of affected military personnel: \$22,159
 (price deflator): 122.60
 Percent of affected military living on-post: 20.00%

STANDARD EIFS MODEL FORECAST: Intell School Enter Ft Huachuca - Realignment Impacts
at Huachuca

Export income multiplier:	1.6135	
Change in local		
Sales volume	Direct:	\$32,439,000
	Induced:	\$19,903,000
	Total:	\$52,342,000 (10.168%)
Employment	Direct:	440
	Total:	2,074 (6.243%)
Income	Direct:	\$4,404,000
	Total (place of work):	\$39,862,000
	Total (place of residence):	\$39,862,000 (4.543%)
Local population		3,521 (3.934%)
Local off-base population		2,974
Number of school children		768
Demand for housing	Rental:	657
	Owner occupied:	487
Civilian employees expected to relocate:		265
Military employees expected to relocate:		1,098

TABLE III
ECONOMIC IMPACT FORECAST SYSTEM
INTELL SCHOOL ENTER FORT FORT HUACHUCA
MILITARY TRAINEE IMPACTS

COUNTY LIST: # FIPS# County
 = ===== =====

1	04003	cochise, az
---	-------	-------------

INPUT PARAMETERS

Deflators: (EIFS default deflators were used)
 (price deflator for baseline year (ex b.v.)): 100.00
 (price deflator for output (ex b.v.)): 122.60
 (price deflator for baseline year (BV)): 100.00
 (price deflator for output (BV)): 112.20
 Number of (non-basic) trainees: 1674.00
 Average income of trainees: \$10,733
 (price deflator): 122.60
 Percent of trainees living on-post: 90.00%

TRAINING IMPACT FORECAST: Intell School Enter Ft Huachuca - Military Trainee Impact at Huachuca

Export income multiplier:	1.6135	
Change in local		
Sales volume	Direct:	
	Induced:	
	Total:	
	\$5,239,000	
	\$3,214,000	
	\$8,453,000	(1.642%)
Employment	Direct:	
	Total:	
	71	
	1,789	(5.385%)
Income	Direct:	
	Total (place of work):	
	\$711,000	
	\$19,115,000	
	Total (place of residence):	
	\$20,911,000	(2.383%)
Local population		
	1,941	(4.657%)
Local off-base population		
	267	
Number of school children		
	0	
Demand for housing	Rental:	
	167	
	Owner occupied:	
	0	
Civilian employees expected to relocate:		
	0	
Military employees expected to relocate:		
	1,674	

TABLE V
ECONOMIC IMPACT FORECAST SYSTEM
ISC LEAVE FOR FT HUACHUCA: REALIGNMENT IMPACTS

COUNTY LIST: # FIPS# County
 = ===== =====
 1 04003 cochise, az

INPUT PARAMETERS

Deflators: (EIFS default deflators were used)
 (price deflator for baseline year (ex b.v.)): 100.00
 (price deflator for output (ex b.v.)): 122.60
 (price deflator for baseline year (BV)): 100.00
 (price deflator for output (BV)): 112.20
 Change in expenditures for local services and supplies: \$-40,500,000
 (price deflator): 112.20
 Change in civilian employment: -1475.00
 Average income of affected civilian personnel: \$41,630
 (price deflator): 122.60
 Percent of affected civilian personnel expected to relocate: 100.0%
 Change in military employment: -788.00
 Average income of affected military personnel: \$26,297
 (price deflator): 122.60
 Percent of affected military living on-post: 28.00%

**STANDARD EIFS MODEL FORECAST: ISC Leaving Ft Huachuca - Realignment Impacts
 at Huachuca**

Export income multiplier:	1.6135	
Change in local		
Sales volume	Direct:	
	Induced:	
	Total:	
		(-29.409%)
Employment	Direct:	
	Total:	
		(-13.000%)
Income	Direct:	
	Total (place of work):	
	Total (place of residence):	
		(-11.702%)
Local population		(-7.085%)
Local off-base population		
Number of school children		
Demand for housing	Rental:	
	Owner occupied:	
Civilian employees expected to relocate:		
Military employees expected to relocate:		

TABLE VI
ECONOMIC IMPACT FORECAST SYSTEM
ISC LEAVE FORT FORT HUACHUCA: SECOND JOB AND WORKING DEPENDENT IMPACTS

COUNTY LIST: # FIPS# County
 = ===== =====
 1 04003 cochise, az

INPUT PARAMETERS

Deflators: (EIFS default deflators were used)
 (price deflator for baseline year (ex b.v.)): 100.00
 (price deflator for output (ex b.v.)): 122.60
 (price deflator for baseline year (BV)): 100.00
 (price deflator for output (BV)): 112.20
 Change in expenditures for local services and supplies: \$0
 (price deflator): 112.20
 Change in civilian employment: -1332.00
 Average income of affected civilian personnel: \$13,242
 (price deflator): 122.60
 Percent of affected civilian personnel expected to relocate: 100.0%
 Change in military employment: 0.00
 Average income of affected military personnel: \$0
 (price deflator): 122.60
 Percent of affected military living on-post: 0.00%

STANDARD EIFS MODEL FORECAST: ISC Leave Ft Huachuca - Second Job & Working Dependent
Impact at Ft Huachuca

Export income multiplier: 1.6135
 Change in local
 Sales volume Direct: -\$12,978,000
 Induced: -\$7,963,000
 Total: -\$20,941,000 (-4.068%)
 Employment Direct: -176
 Total: -1,616 (-4.866%)
 Income Direct: -\$1,762,000
 Total (place of work): -\$20,481,000
 Total (place of residence): -\$20,481,000 (-2.334%)
 Local population 0 (0.000%)
 Local off-base population 0
 Number of school children 0
 Demand for housing Rental: 0
 Owner occupied: 0
 Civilian employees expected to relocate: 0
 Military employees expected to relocate: 0

TABLE VII
ECONOMIC IMPACT FORECAST SYSTEM
CONSTRUCTION IMPACTS

COUNTY LIST: # FIPS# County
 = ===== =====
 1 04003 cochise, az

INPUT PARAMETERS

Deflators: (EIFS default deflators were used)
 (price deflator for baseline year (ex b.v.)): 100.00
 (price deflator for output (ex b.v.)): 122.60
 (price deflator for baseline year (const)): 100.00
 (price deflator for output (const)): 120.50
 Local expenditures for construction project: \$32,300,000
 (price deflator): 120.50
 Percent for labor: 13.00%
 Percent for materials: 12.00%
 Percent of affected local construction workers expected to relocate: 0.0%

CONSTRUCTION IMPACT FORECAST: BRACO Construction at Ft Huachuca

Export income multiplier:	1.6135	
Change in local		
Sales volume	Direct:	\$7,252,000
	Induced:	\$4,449,000
	Total:	\$11,701,000 (2.117%)
Employment	Direct:	92
	Total:	356 (1.073%)
Income	Direct:	\$917,000
	Total (place of work):	\$5,751,000
	Total (place of residence):	\$5,751,000 (0.655%)
Local population		0 (0.000%)
Local off-base population		0
Number of school children		0
Demand for housing	Rental:	0
	Owner occupied:	0
Civilian employees expected to relocate:		0
Military employees expected to relocate:		0

TABLE VIII
ECONOMIC IMPACT FORECAST SYSTEM
ONE-TIME EXPENDITURE IMPACTS

COUNTY LIST: # FIPS# County
 = = = =
 1 04003 cochise, az

INPUT PARAMETERS

Deflators: (EIFS default deflators were used)
 (price deflator for baseline year (ex b.v.)): 100.00
 (price deflator for output (ex b.v.)): 122.60
 (price deflator for baseline year (BV)): 100.00
 (price deflator for output (BV)): 112.20
 Change in expenditures for local services and supplies: \$6,412,500
 (price deflator): 112.20
 Change in civilian employment: 0.00
 Average income of affected civilian personnel: \$0
 (price deflator): 122.60
 Percent of affected civilian personnel expected to relocate: 0.0%
 Change in military employment: 0.00
 Average income of affected military personnel: \$0
 (price deflator): 122.60
 Percent of affected military living on-post: 0.00%

STANDARD EIFS MODEL FORECAST: One-Time Expenditure Impact at Ft Huachuca

Export income multiplier:	1.6135	
Change in local		
Sales volume	Direct:	\$6,412,000
	Induced:	\$3,934,000
	Total:	\$10,347,000 (2.010%)
Employment	Direct:	87
	Total:	140 (0.423%)
Income	Direct:	\$871,000
	Total (place of work):	\$1,405,000
	Total (place of residence):	\$1,405,000 (0.160%)
Local population		0 (0.000%)
Local off-base population		0
Number of school children		0
Demand for housing	Rental:	0
	Owner occupied:	0
Civilian employees expected to relocate:		0
Military employees expected to relocate:		0

**PHASE II
SEA REPORT
SOCIOECONOMIC EFFECTS
ANALYSIS**

**HUACHUCA/DEVENS RELATED BRACO ACTIONS
SOCIOECONOMIC IMPACTS
AT FORT DEVENS**

**REVISED
19 APRIL 1990**

SEA TEAM

Dennis P. Robinson	Project Manager
<i>Economist at the Institute for Water Resources</i>	
Morris W. Clark, Jr.	Associate Project Manager
<i>Economist at the Institute for Water Resources</i>	
Kim M. Bloomquist	Assistant Project Manager
<i>Economist at Savannah District</i>	
Ian McDevitt	Assistant Project Manager
<i>Economist at Memphis District</i>	
Edwin J. Rossman	Assistant Project Manager
<i>Social Scientist at Tulsa District</i>	

**HUACHUCA/DEVENS RELATED BRACO ACTIONS
SOCIOECONOMIC IMPACTS
AT FORT DEVENS**

EXECUTIVE SUMMARY

Fort Devens is scheduled for realignment that is to be completed by the last quarter of FY 1994. Fort Devens is scheduled for realignment in order to consolidate the split Intelligence School training function and Information Systems Command (ISC). The Intelligence School, currently located at Fort Devens, will relocate to Fort Huachuca. The Headquarters, Information Systems Command (ISC) will relocate from Fort Huachuca to Fort Devens. Other ISC activities at Fort Monmouth and Fort Belvoir will also relocate to Fort Devens. These realignment actions include the movement of the Intelligence School from Fort Huachuca to Fort Devens.

Using data provided by the Major Commands, installations, Engineer Districts, and other sources, the SEA team estimates of the primary and secondary regional socioeconomic impacts of the BRACO realignment actions, relevant to Fort Devens, are shown below:

- A net total of 1,459 permanent employees (1,813 civilians will enter and 354 military will leave) will be relocated to Fort Devens, thereby precipitating an annual \$79.4 million increase in total regional wages and salaries. The number of military trainees will decrease by 1,674 (average daily load). It is estimated that total wages and salaries of military trainees will decrease by \$18.0 million. The resultant change in total regional purchasing power will include \$80 million in realignment-associated construction and \$202 million in one-time expenditures. The net number of personnel holding second jobs and working dependents is expected to increase by 326 full-time positions and their wages and salaries are expected to increase by \$5.9 million.
- During the realignment period, the realignment actions at Fort Devens are expected to increase the regional sales volume by \$567.7 million, increase total regional employment by 4,895 person-years, and increase total regional income by \$149.9 million. The disproportionately small increase in total regional income will probably be attributable to the propensity of workers to "send home to other regions" a high percentage of their incomes when those incomes are generated directly from alignment-associated construction and one-time expenditures. A net total of 213 employees (1,813 civilians will enter and 2,026 military will leave) will leave the Fort Devens area as a result of the Huachuca/Devens realignment. The change in total regional population will include an increase in persons living off-post of 3,876 and an increase in children attending public schools of 860, some of whom will also live off-post.¹ The

¹ Increases in the off-post population is substantially more than the overall increase in population. The reason for this difference is that the group leaving, trainees, typically live on base, whereas civilians exclusively live off base. Consequently, the demand for off-post housing substantially increases compared to the overall population change.

realignment actions will produce a 2,265-person net increase in regional population, which after completion of the attendant population-movements will consist of civilians who have more dependents than the displaced military trainees. The total number of occupied housing units within the region will increase by 1,268 (787 owner-occupied units and 481 renter-occupied units). The region's general economic activity is expected to definitely increase. Based on the analyses of all realignment actions at Fort Huachuca, the SEA Team concludes that the attendant "short-term" socioeconomic effects ARE NOT expected to be significant.

- After the realignment period, the realignment actions at Fort Huachuca are expected to increase regional sales volume by \$442.4 million, increase total regional employment by 3,648 person-years, and increase total regional income by \$110.2 million. The disproportionately small increase in total regional income will probably be attributable to the propensity of workers to "send home to other regions" a high percentage of their incomes when those incomes are generated directly from alignment-associated construction and one-time expenditures. A net total of 213 employees (1,813 civilians will enter and 2,026 military will leave) will leave the Fort Devens area as a result of the Huachuca/Devens realignment. The change in total regional population will include an increase in persons living off-post of 3,876 and an increase in children attending public schools of 860, some of whom will also live off-post. The realignment actions will produce a 2,265-person net increase in regional population, which after completion of the attendant population-movements will consist of civilians who have more dependents than the displaced military trainees. The total number of occupied housing units within the region will increase by 1,268 (787 owner-occupied units and 481 renter-occupied units). The region's general economic activity is expected to definitely increase. Based on the analyses of all realignment actions at Fort Huachuca, the SEA Team concludes that the attendant "long-term" socioeconomic effects ARE NOT expected to be significant.

1. INTRODUCTION

The socioeconomic analysis part of the overall study was undertaken to provide the socioeconomic input to the environmental documentation required by the National Environmental Protection Act (NEPA) of 1969. The analyses, findings, and discussions contained in this report are to be used in the preparation of the required NEPA documentation of the socioeconomic impacts of the base closure and realignment actions recommended by the Defense Secretary's Commission on U.S. Army Base Realignments and Closures.

The U.S. Army Base Realignment and Closure Office (BRACO) assigned to the U.S. Army Engineer District, Mobile, Alabama, the task of coordinating the preparation of the required environmental impact statements and assessments. As part of the staff assigned to this environmental evaluation, the BRACO Socioeconomic Effects Analysis (SEA) Team was formed to conduct studies addressing the social and economic impacts of all recommended realignment and closure actions.

This report discusses the Realignment of Fort Devens within the following framework:

- background
- impacts
- analysis
- significance

2. BRACO ACTION: REALIGNMENT OF FORT DEVENS

The Realignment of Fort Devens is scheduled to be completed by the last quarter of FY 1994. Fort Devens is scheduled for realignment in order to consolidate the split Intelligence School training function and Information Systems Command (ISC). The Intelligence School, currently located at Fort Devens, will relocate to Fort Huachuca. The Headquarters, Information Systems Command (ISC) will relocate from Fort Huachuca to Fort Devens. Other ISC activities at Fort Monmouth will also relocate to Fort Devens. This action covers the move of the Intelligence School from Fort Huachuca to Fort Devens.

2.1. DESCRIPTION OF AFFECTED INSTALLATION

- (1) **Mission** Fort Devens, established in 1917, was named for Bvt. Major General Charles Devens, Civil War volunteer officer. Fort Devens is the home for the Army Intelligence School, First U.S. Army, 10th Special Forces Group (Abn), and Headquarter, 187th Infantry Brigade (USAR). The fort is located at Ayr MA, 25 miles northwest of Boston, on 11,629 acres.
- (2) **Demography** As of July 1989, the Fort Devens total population of 7,931 persons consisted of 6,000 military personnel and 1,931 civilian personnel. It is estimated that 67.0 percent of the military personnel reside on-post.

2.2. CHANGES AT FORT DEVENS

Realignment of Fort Devens will be analyzed in terms of the changes that those actions induce in the following three elements: personnel, post expenditures, and realignment-associated construction (see Table I). Those changes will affect, in turn, the socioeconomic conditions in the surrounding region. For Fort Devens, the realignment-induced changes in the three elements are summarized below.

Information Systems Command: Forts Huachuca and Monmouth to Fort Devens

- (1) **Personnel** Permanent party military personnel will increase by 930 and civilian personnel will increase by 2,131. Approximately 95.0 percent of the affected military personnel live on-post. It is estimated that military wages and salaries will increase by \$26.9 million and civilian wages and salaries will increase by \$91.1 million.
- (2) **Post Expenditures** Post expenditures for goods, services, supplies and materials are expected to increase by \$82.5 million due to the realignment action.
- (3) **Military Students and Trainees** There are no change in the number of students or trainees.
- (4) **Second Jobs and Working Dependents** A portion of the affected permanent military and civilian personnel and their dependents hold employment outside their military-related jobs.² Due to the changes in personnel at Fort Devens the number of civilian and military personnel holding second jobs will increase by 122 full-time jobs and the number of working dependents is expected to increase by 1,715 person-years. These job changes will increase regional wages and salaries by \$24.5 million.

Intelligence School: Fort Devens to Fort Huachuca

- (1) **Personnel** Permanent party military personnel will decrease by 1,284 and civilian personnel will decrease by 318. Approximately 67.0 percent of the affected military personnel live on-post. It is estimated that military wages and salaries will decrease by \$28.5 million and civilian wages and salaries will decrease by \$10.1 million.

² Based on an Air Force survey of personnel and their dependents there are 4 full-time second-job positions per 100 military and civilian personnel at an average annual salary of \$14,181. In addition, there are 38.2 full-time positions held by dependents per 100 military personnel at an average annual salary of \$11,442 and 63.8 full-time positions held per 100 civilian personnel at an average annual salary of \$13,727. (William D. Gunther. Socioeconomic Survey of Air Force Employees. Report prepared for Headquarters Engineering Services Center, Directorate of Environmental Planning, 13 November 1982).

- (2) **Post Expenditures** Post expenditures for goods, services, supplies and materials are expected to decrease by \$3.4 millions due to the realignment action.
- (3) **Military Students and Trainees** The number of military trainees will decrease by 1,674 (average daily load). It is estimated that trainees wages and salaries will decrease by \$18.0 million.
- (4) **Second Jobs and Working Dependents** A portion of the affected permanent military and civilian personnel and their dependents hold employment outside their military-related jobs.³ Due to the changes in personnel at Fort Devens the number of civilian and military personnel holding second jobs will decrease by 63 full-time jobs and the number of working dependents is expected to decrease by 692 person-years. These job changes will decrease regional wages and salaries by \$9.3 million.

Construction and One-Time Expenditures

- (1) **Construction** Realignment-associated construction expenditures will be \$80.0 million.
- (2) **One-Time Expenditures** Realignment activities in the Fort Devens area for housing assistance and other costs will mean a one-time expenditure of \$202.0 million.

3. IMPACTS OF THE REALIGNMENT OF FORT DEVENS

Military installations undergoing realignment actions are parts of the overall social and economic fabric (situation) of the regions in which they are located. For Fort Devens, the existing socioeconomic situation of both the installation and its associated region are described below.

3.1. DESCRIPTION OF AFFECTED REGION

The demographic and economic parameters for the region are listed in detail in Appendix I. The most relevant information underlying the data in Appendix I is discussed in the following paragraphs.

³ Based on an Air Force survey of personnel and their dependents there are 4 full-time second-job positions per 100 military and civilian personnel at an average annual salary of \$14,181. In addition, there are 38.2 full-time positions held by dependents per 100 military personnel at an average annual salary of \$11,442 and 63.8 full-time positions held per 100 civilian personnel at an average annual salary of \$13,727. (William D. Gunther. Socioeconomic Survey of Air Force Employees. Report prepared for Headquarters Engineering Services Center, Directorate of Environmental Planning, 13 November 1982).

- (1) **Regional Definition** In this report, the term "region" is defined as the geopolitical area (a conglomerate of counties and other municipalities) which is expected to experience significant socioeconomic effects that are induced by the realignment actions at Fort Devens. Therefore, the Engineer District responsible for preparation of the environmental assessment of the Fort Devens realignment actions has stipulated that the relevant region for Fort Devens should include the counties of Middlesex, Suffolk, and Worcester in the state of Massachusetts and Hillsborough in the state of New Hampshire. This region encompasses an area of 3,268 square miles.
- (2) **Demography** The 1980 regional population, according to the 1980 Census, was 2,940,136. The estimated 1989 regional population is 3,063,409. Between 1980 and 1989, regional population increased by 4.2 percent. The 1994 regional population is projected to be 3,132,596.
- (3) **Economic Activity** An analysis of average annual data indicates that the 1988 civilian labor force was 1,666,822. In 1989, the largest employing industrial sector is Services which employs 33.7 percent of the total employed labor. The regional unemployment rate is now 2.9 percent. It is estimated that 0.4 percent of the total civilian employed labor force in the region is directly employed at Fort Devens. The 1989 regional per capita income is \$17,049. The 1994 regional per capita personal income is projected to be \$23,768. The regional total personal income was \$59,409.2 million in 1987.
- (4) **Housing** The 1980 Census shows a regional total of 1,104,216 housing units, and a regional housing vacancy rate of 5.0 percent.

3.2. ESTIMATED SOCIOECONOMIC IMPACTS

The BRACO study managers and the BRACO SEA Team have concurred in the decision to use the Construction Engineering Research Laboratory (CERL) Economic Impact Forecasting System (EIFS) model to quantify the socioeconomic impacts associated with the recommended realignment actions. The outputs of the EIFS model are discussed herein in terms of changes (losses or gains) within the region where a realignment-associated installation is located.

Impacts (regional losses or gains) associated directly with alignment actions are considered to be primary impacts. Primary impacts include the changes in the following parameters: personnel employed at the installation, their salaries, procurement, and the initial expenditures of realignment-associated construction. Secondary impacts are those effects induced by the initial (primary) impact; for example, a decrease (change) in the regional demand for goods and services that is associated with a regional decrease (change) in the number of persons earning wages and salaries. In this case, the change (decrease) in demand is the secondary impact that was induced by the primary impact which is the change (decrease) in the number of actual or potential purchasers (persons earnings wages and salaries). Total impacts for a region include all of the primary and secondary impacts

within that region. A detailed discussion of the EIFS model follows at the end of this appendix. A listing of all of the outputs of the EIFS model is provided in Tables II and III.

Information Systems Command: Forts Huachuca and Monmouth to Fort Devens

- (1) **Realignment Economic Impacts** The realignment actions will result in an increase (gain) in the sales volume for regional merchants of \$527.0 million. The primary and secondary impacts will result in a 7,662 person-year increase in regional employment, and a \$195.9 million increase in regional income.
- (2) **Military Student and Trainee Economic Impacts** Because there are no changes in students and trainees, there are no associated impacts.
- (3) **Second Jobs and Working Dependents Economic Impacts⁴** The total primary and secondary impacts of the change in the number of personnel holding second jobs and working dependents will result in increasing regional sales volume by \$60.6 million, increasing regional employment by 2,366 person-years, and increasing regional personal income by \$33.4 million.

Intelligence School: Fort Devens to Fort Huachuca

- (1) **Realignment Economic Impacts** The realignment actions will result in a decrease (loss) in the sales volume for regional merchants of \$66.9 million. The primary and secondary impacts will result in a 2,186 person-year decrease in regional employment, and a \$48.5 million decrease in regional income.

⁴ The SEA Team has opted to not include these impacts with the total regional impacts of this action because their inclusion is considered to be technically and conceptually open to question. While personnel holding second jobs and their working dependents are acknowledged to generate economic effects that are an additional dimension of this impact analysis, the exclusion of such impacts is predicated on the assumption that the affected workers either hold positions that are already part of the estimated secondary impacts attributable to the BRACO action or are employed by firms in which production decisions contingent upon sources of demand that are not associated with the BRACO action (i.e., it is assumed that these affected workers will be replaced if they leave their positions). Consequently, the SEA Team estimates and shows these impacts in a separate table. If the preparers of the relevant Environmental Impact Statements (EISs) deem that these impacts should be included with the total regional socioeconomic impacts of the BRACO action, they may do by simply adding these impacts to the total impacts estimated by the SEA Team.

- (3) **Military Student and Trainee Economic Impacts** The total primary and secondary impacts of the change in the number of military trainees will result in the regional sales volume decreasing by \$17.6 million, regional employment decreasing by 1,828 person-years, and regional personal income decreasing by \$20.6 million.
- (4) **Second Jobs and Working Dependents Economic Impacts** The total primary and secondary impacts of the change in the number of personnel holding second jobs and working dependents will result in decreasing regional sales volume by \$23.0 million, decreasing regional employment by 958 person-years, and decreasing regional personal income by \$12.7 million.

Construction and One-Time Expenditures

- (1) **Construction Economic Impacts⁵** All construction impacts will occur during the construction period of 1991 through 1994. The total primary and secondary impacts of realignment-associated construction will result in the regional sales volume increasing by \$40.4 million, regional employment increasing by 505 person-years, and regional personal income increasing by \$10.4 million.
- (2) **One-Time Expenditure Economic Impacts⁶** All one-time expenditure impacts will occur during the construction period of 1991 through 1994. The total primary and secondary impacts of realignment-associated one-expenditures will result in the regional sales volume increasing by \$85.0 million, regional employment increasing by 742 person-years, and regional personal income increasing by \$12.6 million.

Summary of Socioeconomic Impacts

Using data provided by the Major Commands, installations, Engineer Districts, and other sources, the SEA team estimates of the primary and secondary regional socioeconomic impacts of the BRACO realignment actions, relevant to Fort Devens, are shown below:

⁵The impacts of construction are analyzed on an annual-average basis, starting FY 1991 through the completion of the subject BRACO action. For example, a BRACO action commencing FY 1991 and ending in FY 1994 will have construction expenditures occurring over a four-year period. Not knowing the actual temporal pattern of these expenditures, the SEA Team assumed that they would occur on an annual-average basis.

⁶The impacts of one-time expenditures are analyzed on an annual-average basis, starting FY 1991 through the completion of the subject BRACO action. For example, a BRACO action commencing FY 1991 and ending in FY 1994 will have one-time expenditures occurring over a four-year period. Not knowing the actual temporal pattern of these expenditures, the SEA Team assumed that they would occur on an annual-average basis.

A net total of 1,459 permanent employees (1,813 civilians will enter and 354 military will leave) will be relocated to Fort Devens, thereby precipitating an annual \$79.4 million increase in total regional wages and salaries. The number of military trainees will decrease by 1,674 (average daily load). It is estimated that total wages and salaries of military trainees will decrease by \$18.0 million. The resultant change in total regional purchasing power will include \$80 million in realignment-associated construction and \$202 million in one-time expenditures. The net number of personnel holding second jobs and working dependents is expected to increase by 326 full-time positions and their wages and salaries are expected to increase by \$5.9 million.

During the realignment period, the realignment actions at Fort Devens are expected to increase the regional sales volume by \$567.7 million, increase total regional employment by 4,895 person-years, and increase total regional income by \$149.9 million. The disproportionately small increase in total regional income will probably be attributable to the propensity of workers to "send home to other regions" a high percentage of their incomes when those incomes are generated directly from alignment-associated construction and one-time expenditures. A net total of 213 employees (1,813 civilians will enter and 2,026 military will leave) will leave the Fort Devens area as a result of the Huachuca/Devens realignment. The change in total regional population will include an increase in persons living off-post of 3,876 and an increase in children attending public schools of 860, some of whom will also live off-post.⁷ The realignment actions will produce a 2,265-person net increase in regional population, which after completion of the attendant population-movements will consist of civilians who have more dependents than the displaced military trainees. The total number of occupied housing units within the region will increase by 1,268 (787 owner-occupied units and 481 renter-occupied units). The region's general economic activity is expected to definitely increase. Based on the analyses of all realignment actions at Fort Huachuca, the SEA Team concludes that the attendant "short-term" socio-economic effects ARE NOT expected to be significant.

After the realignment period, the realignment actions at Fort Huachuca are expected to increase regional sales volume by \$442.4 million, increase total regional employment by 3,648 person-years, and increase total regional income by \$110.2 million. The disproportionately small increase in total regional income will probably be attributable to the propensity of workers to "send home to other regions" a high percentage of their incomes when those incomes are generated directly from alignment-associated construction and one-time expenditures. A net total of 213 employees (1,813 civilians will enter and 2,026 military will leave) will

⁷ Increases in the off-post population is substantially more than the overall increase in population. The reason for this difference is that the group leaving, trainees, typically live on base, whereas civilians exclusively live off base. Consequently, the demand for off-post housing substantially increases compared to the overall population change.

leave the Fort Devens area as a result of the Huachuca/Devens realignment. The change in total regional population will include an increase in persons living off-post of 3,876 and an increase in children attending public schools of 860, some of whom will also live off-post. The realignment actions will produce a 2,265-person net increase in regional population, which after completion of the attendant population-movements will consist of civilians who have more dependents than the displaced military trainees. The total number of occupied housing units within the region will increase by 1,268 (787 owner-occupied units and 481 renter-occupied units). The region's general economic activity is expected to definitely increase.

4. SIGNIFICANCE OF REALIGNMENT OF FORT DEVENS

The significance of these impacts may be evaluated by a variety of criteria. Significance in this analysis is viewed in terms of the overall change in regional conditions. Significance is also determined by gauging the economic resiliency of a region in terms of threshold values representing the maximum of historic variation (the Rational Threshold Value method) and by evaluating the "normal" fluctuations experienced by the region (the Forecast Significance of Impacts procedure). These methods compare the impacts of a proposed action to the historic fluctuations experienced by the region. The details of those methods and a table exhibiting criteria for the testing of significance are found in Appendix II, while the information used to evaluate the significance of the impacts are found in Tables V and VI.

During the realignment period, the expected changes in regional sales volume, employment, income, and population within the Fort Devens area represent 1.0%, .2 %, .2%, and .001% of their 1987 levels, respectively. After the realignment period, the expected changes in regional sales volume, employment, income, and population within the Fort Devens area represent .8%, .2%, .06%, and .001% of their 1987 levels, respectively. Based on the analyses of all actions at Fort Devens, the SEA Team concludes that the attendant socioeconomic effects of those actions ARE NOT significant.⁸

5. RELATED ACTIONS AT OTHER INSTALLATIONS

The Realignment of Fort Devens will necessitate changes in personnel at Forts Huachuca and Monmouth.

⁸ The change in regional sales volume, employment income, and population exceed both the RTV and FSI criteria for significance.

TABLE 1
MAJOR PERSONNEL CHANGES AT INSTALLATIONS AFFECTED BY REALIGNMENT OF FORTS HUACHUCA, DEVENS, AND MONMOUTH

REVISED: 19 APRIL 1990

	FORT HUACHUCA (subtractions)	FORT HUACHUCA (additions)	FORT DEVENS (subtractions)	FORT DEVENS * (additions)	FORT MONMOUTH (subtractions)	
EXPENDITURE CHANGES	(\$40,500)	\$16,300	(\$3,435)	\$82,500	(\$37,600)	
CIVILIAN PERSONNEL						
Number	-1475	265	-318	2131	-331	
Wages & Salaries	\$41,630	\$31,794	\$31,794	\$42,742	\$43,014	
MILITARY PERSONNEL						
Number	-788	1098	-1284	930	-74	
Wages & Salaries	\$26,297	\$22,159	\$22,159	\$28,964	\$31,294	
% On-Post	28%	20%	67%	95%	86%	
BRACO CONSTRUCTION	\$0	\$32,300	\$0	\$20,000	\$0	
ONE-TIME EXPENDITURES	\$0	\$6,412	\$0	\$25,250	\$675	
MILITARY STUDENTS						
Number	0	0	0	0	0	
Wages & Salaries	\$0	\$0	\$0	\$0	\$0	
% On-Post	0%	0%	0%	0%	0%	
MILITARY TRAINEES						
Number	0	1674	-1674	0	0	
Wages & Salaries	\$0	\$10,733	\$10,733	\$0	\$0	
% On-Post	0%	90%	90%	0%	0%	
TOTAL OTHER JOBS						
Number	-1333	643	-757	1837	-256	
Wages & Salaries	\$13,242	\$12,275	\$12,286	\$13,315	\$13,503	

NOTE: All amounts of money, except wages and salaries, are in thousands of dollars. Wages and salaries are means expressed in dollars. "Total Other Jobs" is applicable to civilian and military personnel and their resident family members.

SOURCE: Data supplied by the Major Commands responsible for the affected installations. N.A. means not available.

* Includes 347 civilian and 79 military positions from Fort Belvoir as shown on Figure 2.2-1 (main text) and described in Section 4.3.2.2 (main text).

NOTE: Dollar amounts are annualized for the BRAC realignment and construction period (1990-1994).

TABLE II
ECONOMIC IMPACT FORECAST SYSTEM
ISC ENTER FORT DEVENS: REALIGNMENT IMPACTS

COUNTY LIST: # FIPS# County
 = ===== =====

1	25017	middlesex, ma
2	25025	suffolk, ma
3	25027	worcester, ma
4	33011	hillsborough, nh

INPUT PARAMETERS

Deflators: (EIFS default deflators were used)
 (price deflator for baseline year (ex b.v.)): 100.00
 (price deflator for output (ex b.v.)): 122.60
 (price deflator for baseline year (BV)): 100.00
 (price deflator for output (BV)): 112.20
 Change in expenditures for local services and supplies: \$82,500,000
 (price deflator): 112.20
 Change in civilian employment: 2131.00
 Average income of affected civilian personnel: \$42,742
 (price deflator): 122.60
 Percent of affected civilian personnel expected to relocate: 100.0%
 Change in military employment: 930.00
 Average income of affected military personnel: \$28,964
 (price deflator): 122.60
 Percent of affected military living on-post: 95.00%

STANDARD EIFS MODEL FORECAST: ISC Entering Devens - Realignment Impact at Devens

Export income multiplier:	3.3653	
Change in local		
Sales volume	Direct:	\$156,585,000
	Induced:	\$370,372,000
	Total:	\$526,957,000 (0.672%)
Employment	Direct:	1,367
	Total:	7,662 (0.413%)
Income	Direct:	\$23,143,000
	Total (place of work):	\$195,902,000
	Total (place of residence):	\$177,394,000 (0.375%)
Local population		8,289 (0.281%)
Local off-base population		6,089
Number of school children		1,713
Demand for housing	Rental:	1,075
	Owner occupied:	1,102
Civilian employees expected to relocate:		2,131
Military employees expected to relocate:		930

TABLE III
ECONOMIC IMPACT FORECAST SYSTEM
ISC ENTER FORT DEVENS: SECOND JOB AND WORKING DEPENDENT IMPACTS

COUNTY LIST:	#	FIPS#	County
	=	=====	=====
	1	25017	middlesex, ma
	2	25025	suffolk, ma
	3	25027	worcester, ma
	4	33011	hillsborough, nh

INPUT PARAMETERS

Deflators: (EIFS default deflators were used)
 (price deflator for baseline year (ex b.v.)): 100.00
 (price deflator for output (ex b.v.)): 122.60
 (price deflator for baseline year (BV)): 100.00
 (price deflator for output (BV)): 112.20
 Change in expenditures for local services and supplies: \$0
 (price deflator): 112.20
 Change in civilian employment: 1837.00
 Average income of affected civilian personnel: \$13,315
 (price deflator): 122.60
 Percent of affected civilian personnel expected to relocate: 100.0%
 Change in military employment: 0.00
 Average income of affected military personnel: \$0
 (price deflator): 122.60
 Percent of affected military living on-post: 0.00%

STANDARD EIFS MODEL FORECAST: ISC Enter Ft Devens - Second Job & Working Dependent
Impact at Ft Devens

Export income multiplier:	3.3653	
Change in local		
Sales volume	Direct:	\$17,997,000
	Induced:	\$42,569,000
	Total:	\$60,567,000 (0.077%)
Employment	Direct:	157
	Total:	2,366 (0.128%)
Income	Direct:	\$2,660,000
	Total (place of work):	\$33,411,000
	Total (place of residence):	\$29,780,000 (0.063%)
Local population		0 (0.000%)
Local off-base population		0
Number of school children		0
Demand for housing	Rental:	0
	Owner occupied:	0
Civilian employees expected to relocate:		0
Military employees expected to relocate:		0

TABLE IV
ECONOMIC IMPACT FORECAST SYSTEM
INTELL SCHOOL LEAVE FORT DEVENS
REALIGNMENT IMPACTS

COUNTY LIST:	#	FIPS#	County
	=	=====	=====
	1	25017	middlesex, ma
	2	25025	suffolk, ma
	3	25027	worcester, ma
	4	33011	hillsborough, nh

INPUT PARAMETERS

Deflators: (EIFS default deflators were used)
 (price deflator for baseline year (ex b.v.)): 100.00
 (price deflator for output (ex b.v.)): 122.60
 (price deflator for baseline year (BV)): 100.00
 (price deflator for output (BV)): 112.20
 Change in expenditures for local services and supplies: \$-3,435,000
 (price deflator): 112.20
 Change in civilian employment: -318.00
 Average income of affected civilian personnel: \$31,794
 (price deflator): 122.60
 Percent of affected civilian personnel expected to relocate: 100.0%
 Change in military employment: -1284.00
 Average income of affected military personnel: \$22,159
 (price deflator): 122.60
 Percent of affected military living on-post: 67.00%

STANDARD EIFS MODEL FORECAST: Intell School Leaving Devens - Realignment Impacts
at Devens

Export income multiplier:	3.3653	
Change in local		
Sales volume	Direct:	
	Induced:	
	Total:	
		(-0.085%)
Employment	Direct:	
	Total:	
		(-0.118%)
Income	Direct:	
	Total (place of work):	
	Total (place of residence):	
		(-0.096%)
Local population		(-0.139%)
Local off-base population		
Number of school children		
Demand for housing	Rental:	
	Owner occupied:	
Civilian employees expected to relocate:		
Military employees expected to relocate:		

TABLE V
ECONOMIC IMPACT FORECAST SYSTEM
INTELL SCHOOL LEAVE FORT DEVENS
MILITARY TRAINEE IMPACTS

COUNTY LIST:	#	FIPS#	County
	=	=====	=====
	1	25017	middlesex, ma
	2	25025	suffolk, ma
	3	25027	worcester, ma
	4	33011	hillsborough, nh

INPUT PARAMETERS

Deflators: (EIFS default deflators were used)
 (price deflator for baseline year (ex b.v.)): 100.00
 (price deflator for output (ex b.v.)): 122.60
 (price deflator for baseline year (BV)): 100.00
 (price deflator for output (BV)): 112.20
 Number of (non-basic) trainees: -1674.00
 Average income of trainees: \$10,733
 (price deflator): 122.60
 Percent of trainees living on-post: 90.00%

TRAINING IMPACT FORECAST: Intell School Leaving Devens - Training Impact at Devens

Export income multiplier:	3.3653	
Change in local		
Sales volume	Direct:	
	Induced:	
	Total:	
Employment	Direct:	
	Total:	
Income	Direct:	
	Total (place of work):	
	Total (place of residence):	
Local population		
Local off-base population		
Number of school children		
Demand for housing	Rental:	
	Owner occupied:	
Civilian employees expected to relocate:		
Military employees expected to relocate:		

TABLE VI
ECONOMIC IMPACT FORECAST SYSTEM
INTELL SCHOOL LEAVE FORT DEVENS
SECOND JOB AND WORKING DEPENDENT IMPACTS

COUNTY LIST:	#	FIPS#	County
	=	=====	=====
	1	25017	middlesex, ma
	2	25025	suffolk, ma
	3	25027	worcester, ma
	4	33011	hillsborough, nh

INPUT PARAMETERS

Deflators: (EIFS default deflators were used)
 (price deflator for baseline year (ex b.v.)): 100.00
 (price deflator for output (ex b.v.)): 122.60
 (price deflator for baseline year (BV)): 100.00
 (price deflator for output (BV)): 112.20
 Change in expenditures for local services and supplies: \$0
 (price deflator): 112.20
 Change in civilian employment: -757.00
 Average income of affected civilian personnel: \$12,286
 (price deflator): 122.60
 Percent of affected civilian personnel expected to relocate: 100.0%
 Change in military employment: 0.00
 Average income of affected military personnel: \$0
 (price deflator): 122.60
 Percent of affected military living on-post: 0.00%

STANDARD EIFS MODEL FORECAST: Intell School Leave Ft Devens - Second & Working
Dependent Job Impact at Ft Devens

Export income multiplier:	3.3653	
Change in local		
Sales volume	Direct:	
	Induced:	
	Total:	
Employment	Direct:	
	Total:	
Income	Direct:	
	Total (place of work):	
	Total (place of residence):	
Local population		
Local off-base population		
Number of school children		
Demand for housing	Rental:	
	Owner occupied:	
Civilian employees expected to relocate:		
Military employees expected to relocate:		

TABLE VII
ECONOMIC IMPACT FORECAST SYSTEM
ISC ENTER FORT DEVENS: CONSTRUCTION IMPACTS

COUNTY LIST:	#	FIPS#	County
	=	=====	=====
	1	25017	middlesex, ma
	2	25025	suffolk, ma
	3	25027	worcester, ma
	4	33011	hillsborough, nh

INPUT PARAMETERS

Deflators: (EIFS default deflators were used)
 (price deflator for baseline year (ex b.v.)): 100.00
 (price deflator for output (ex b.v.)): 122.60
 (price deflator for baseline year (const)): 100.00
 (price deflator for output (const)): 120.50
 Local expenditures for construction project: \$14,057,007 (calculated)
 Non-local value entered: \$20,000,000
 (price deflator): 120.50
 Percent for labor: 34.20%
 Percent for materials: 57.80%
 Percent of affected local construction workers expected to relocate: 0.0%

CONSTRUCTION IMPACT FORECAST: BRACO Construction Impact at Devens

Export income multiplier:	3.3653	
Change in local		
Sales volume	Direct:	\$11,990,000
	Induced:	\$28,360,000
	Total:	\$40,351,000 (0.048%)
Employment	Direct:	97
	Total:	505 (0.027%)
Income	Direct:	\$1,650,000
	Total (place of work):	\$10,444,000
	Total (place of residence):	\$9,841,000 (0.021%)
Local population		0 (0.000%)
Local off-base population		0
Number of school children		0
Demand for housing	Rental:	0
	Owner occupied:	0
Civilian employees expected to relocate:		0
Military employees expected to relocate:		0

TABLE VIII
ECONOMIC IMPACT FORECAST SYSTEM
ISC ENTER PORT DEVENS: ONE-TIME EXPENDITURE IMPACTS

COUNTY LIST: # FIPS# County
 = ===== =====

1	25017	middlesex, ma
2	25025	suffolk, ma
3	25027	worcester, ma
4	33011	hillsborough, nh

INPUT PARAMETERS

Deflators: (EIFS default deflators were used)
 (price deflator for baseline year (ex b.v.)): 100.00
 (price deflator for output (ex b.v.)): 122.60
 (price deflator for baseline year (BV)): 100.00
 (price deflator for output (BV)): 112.20
 Change in expenditures for local services and supplies: \$25,250,000
 (price deflator): 112.20
 Change in civilian employment: 0.00
 Average income of affected civilian personnel: \$0
 (price deflator): 122.60
 Percent of affected civilian personnel expected to relocate: 0.0%
 Change in military employment: 0.00
 Average income of affected military personnel: \$0
 (price deflator): 122.60
 Percent of affected military living on-post: 0.00%

STANDARD EIFS MODEL FORECAST: One-Time Expenditure Impact at Devens

Export income multiplier:	3.3653	
Change in local		
Sales volume	Direct:	\$25,250,000
	Induced:	\$59,724,000
	Total:	\$84,974,000 (0.108%)
Employment	Direct:	220
	Total:	742 (0.040%)
Income	Direct:	\$3,732,000
	Total (place of work):	\$12,559,000
	Total (place of residence):	\$11,194,000 (0.024%)
Local population		0 (0.000%)
Local off-base population		0
Number of school children		0
Demand for housing	Rental:	0
	Owner occupied:	0
Civilian employees expected to relocate:		0
Military employees expected to relocate:		0

**PHASE II
SEA REPORT
SOCIOECONOMIC EFFECTS
ANALYSIS**

HUACHUCA/DEVENS RELATED BRACO ACTIONS

**SOCIOECONOMIC IMPACTS
AT FORT MONMOUTH**

**REVISED
19 April 1990**

SEA TEAM

Dennis P. Robinson	Project Manager
<i>Economist at the Institute for Water Resources</i>	
Morris W. Clark, Jr.	Associate Project Manager
<i>Economist at the Institute for Water Resources</i>	
Kim M. Bloomquist	Assistant Project Manager
<i>Economist at Savannah District</i>	
Ian McDevitt	Assistant Project Manager
<i>Economist at Memphis District</i>	
Edwin J. Rossman	Assistant Project Manager
<i>Social Scientist at Tulsa District</i>	

**HUACHUCA/DEVENS RELATED BRACO ACTIONS
SOCIOECONOMIC IMPACTS
AT FORT MONMOUTH**

EXECUTIVE SUMMARY

Fort Monmouth is scheduled for Realignment that is to be completed by the last quarter of FY 1994. Fort Monmouth is scheduled for realignment in connection with the recommended realignment at Fort Devens in order to consolidate the split Intelligence School training function and Information Systems Command (ISC). The Intelligence School, currently located at Fort Devens, will relocate to Fort Huachuca. The Headquarters, Information Systems Command will relocate from Fort Huachuca to Fort Devens. Other ISC activities at Fort Monmouth will also relocate to Fort Devens. This action covers the move of the Information Systems Command activities from Fort Monmouth to Fort Devens.

Using data provided by the Major Commands, installations, Engineer Districts, and other sources, the SEA team estimates of the primary and secondary regional socioeconomic impacts of the BRACO realignment actions, relevant to Fort Monmouth, are shown below:

- A net total of 405 permanent employees (331 civilians and 74 military) will leave Fort Monmouth, thereby precipitating an annual \$16.6 million decrease in total regional wages and salaries. This total decrease in regional purchasing power from all sources will be offset by \$5.4 million in one-time expenditures. The number of personnel holding second jobs and working dependents is expected to decrease by 254 full-time positions and their wages and salaries will decrease by \$3.4 million.
- During the realignment period, all actions at Fort Monmouth are expected to decrease regional sales volume by \$197.4 million, decrease regional employment by 1,684 person-years, and decrease regional income by \$37.7 million. A net total of 405 employees (331 civilians and 74 military) will leave the Fort Monmouth area as a result of the Huachuca/Devens realignment. The actions at Fort Monmouth are expected to result in a 1,141-person decrease in regional population. The total decrease in regional population will include a decrease in persons living off-post of 983 and a decrease in children attending public schools of 227, some of whom also live off-post. There will be a 341-unit decrease in the total number of occupied housing units within the region (110 owner-occupied units and 231 renter-occupied units). In conclusion, the region's general economic activity will definitely decrease. Based on the analyses of all actions at Fort Monmouth, the SEA Team concludes that the "short-term" attendant socioeconomic effects of those actions ARE NOT significant.
- After the realignment period, all actions at Fort Monmouth are expected to decrease regional sales volume by \$200.2 million, decrease regional employment by 1,702 person-years, and decrease regional income by \$38.07 million. A net total of 405 employees (331 civilians and 74 military) will leave the Fort Monmouth area as a result of the Huachuca/Devens realignment. The actions at Fort Monmouth are expected to result in a 1,141-person decrease in regional population. The total decrease in regional

population will include a decrease in persons living off-post of 983 and a decrease in children attending public schools of 227, some of whom also live off-post. There will be a 341-unit decrease in the total number of occupied housing units within the region (110 owner-occupied units and 231 renter-occupied units). In conclusion, the region's general economic activity will definitely a decrease. Based on the analyses of all actions at Fort Monmouth, the SEA Team concludes that the "long-term" attendant socioeconomic effects of those actions ARE NOT significant.

1. INTRODUCTION

The socioeconomic analysis part of the overall study was undertaken to provide the socioeconomic input to the environmental documentation required by the National Environmental Protection Act (NEPA) of 1969. The analyses, findings, and discussions contained in this report are to be used in the preparation of the required NEPA documentation of the socioeconomic impacts of the base closure and realignment actions recommended by the Defense Secretary's Commission on U.S. Army Base Realignments and Closures.

The U.S. Army Base Realignment and Closure Office (BRACO) assigned to the U.S. Army Engineer District, Mobile, Alabama, the task of coordinating the preparation of the required environmental impact statements and assessments. As part of the staff assigned to this environmental evaluation, the BRACO Socioeconomic Effects Analysis (SEA) Team was formed to conduct studies addressing the social and economic impacts of all recommended realignment and closure actions.

This report discusses the Realignment of Fort Monmouth within the following framework:

- background
- impacts
- analysis
- significance

2. BRACO ACTION: REALIGNMENT OF FORT MONMOUTH

The Realignment of Fort Monmouth is scheduled to be completed by the last quarter of FY 1994. Fort Monmouth is scheduled for realignment in connection with the recommended realignment at Fort Devens in order to consolidate the split Intelligence School training function and Information Systems Command (ISC). The Intelligence School, currently located at Fort Devens, will relocate to Fort Huachuca. The Headquarters, Information Systems Command will relocate from Fort Huachuca to Fort Devens. Other ISC activities at Fort Monmouth will also relocate to Fort Devens. This action covers the move of the Information Systems Command activities from Fort Monmouth to Fort Devens.

2.1. DESCRIPTION OF AFFECTED INSTALLATION

- (1) **Mission** Fort Monmouth, established in 1917, was named for the Revolutionary War Battle (1778). Fort Monmouth is the home of Headquarters, Army Communications-Electronics Command, Information Systems Engineering Command, Chaplain Center and School, and USMA Prep School. The fort is located 50 miles south of New York City on 1,060 acres.
- (2) **Demography** As of July 1989, the Fort Monmouth total population of 11,892 persons consisted of 2,723 military personnel and 9,169 civilian personnel. It is estimated that 86.0 percent of the military personnel reside on-post.

2.2. CHANGES AT FORT MONMOUTH

Realignment of Fort Monmouth will be analyzed in terms of the changes that those actions induce in the following three elements: personnel, post expenditures, and realignment-associated construction (see Table I). Those changes will affect, in turn, the socioeconomic conditions in the surrounding region. For Fort Monmouth, the realignment-induced changes in the three elements are summarized below.

- (1) **Personnel** Permanent party military personnel will decrease by 74 and civilian personnel will decrease by 331. Approximately 86.0 percent of the affected military personnel live on-post. It is estimated that military wages and salaries will decrease by \$2.3 million and civilian wages and salaries will decrease by \$14.2 million.
- (2) **Post Expenditures** Post expenditures for goods, services, supplies and materials are expected to decrease by \$37.6 million due to the realignment action.
- (3) **Construction** There are no realignment-associated construction.
- (4) **One-Time Expenditures** Realignment activities in the Fort Monmouth area for housing assistance and other costs will mean a one-time expenditure of \$5.4 million.
- (5) **Military Students and Trainees** There are no affected military students or trainees.
- (6) **Second Jobs and Working Dependents** A portion of the affected permanent military and civilian personnel and their dependents hold employment outside their military-related jobs.¹ Due to the changes in personnel at Fort Monmouth the number of civilian and military personnel holding second jobs will decrease by 15 full-time jobs and the number of working dependents is expected to decrease by 238 person-years. These job changes will decrease regional wages and salaries by \$3.4 million.

3. IMPACTS OF THE REALIGNMENT OF FORT MONMOUTH

Military installations undergoing realignment actions are parts of the overall social and economic fabric (situation) of the regions in which they are located. For Fort Monmouth, the existing socioeconomic situation of both the installation and its associated region are described below.

¹ Based on an Air Force survey of personnel and their dependents there are 4 full-time second-job positions per 100 military and civilian personnel at an average annual salary of \$14,181. In addition, there are 38.2 full-time positions held by dependents per 100 military personnel at an average annual salary of \$11,442 and 63.8 full-time positions held per 100 civilian personnel at an average annual salary of \$13,727. (William D. Gunther. Socioeconomic Survey of Air Force Employees. Report prepared for Headquarters Engineering Services Center, Directorate of Environmental Planning, 13 November 1982).

3.1. DESCRIPTION OF AFFECTED REGION

The demographic and economic parameters for the region are listed in detail in Appendix I. The most relevant information underlying the data in Appendix I is discussed in the following paragraphs.

- (1) **Regional Definition** In this report, the term "region" is defined as the geopolitical area (a conglomerate of counties and other municipalities) which is expected to experience significant socioeconomic effects that are induced by the realignment actions at Fort Monmouth. Therefore, the Engineer District responsible for preparation of the environmental assessment of the Fort Monmouth realignment actions has stipulated that the relevant region for Fort Monmouth should include the counties of Middlesex, Monmouth, Ocean, and Union in the state of New Jersey. This region encompasses an area of 1,533 square miles.
- (2) **Demography** The 1980 regional population, according to the 1980 Census, was 1,949,198. The estimated 1989 regional population is 2,151,449. Between 1980 and 1989, regional population increased by 10.4 percent. The 1994 regional population is projected to be 2,274,353.
- (3) **Economic Activity** An analysis of average annual data indicates that the 1988 civilian labor force was 1,121,130. In 1989, the largest employing industrial sector is Services which employs 26.3 percent of the total employed labor. The regional unemployment rate is now 3.4 percent. It is estimated that 1.1 percent of the total civilian employed labor force in the region is directly employed at Fort Monmouth. The 1989 regional per capita income is \$17,514. The 1994 regional per capita personal income is projected to be \$23,574. The regional total personal income was \$44,089.0 million in 1987.
- (4) **Housing** The 1980 Census shows a regional total of 706,572 housing units, and a regional housing vacancy rate of 4.7 percent.

3.2. ESTIMATED SOCIOECONOMIC IMPACTS

The BRACO study managers and the BRACO SEA Team have concurred in the decision to use the Construction Engineering Research Laboratory (CERL) Economic Impact Forecasting System (EIFS) model to quantify the socioeconomic impacts associated with the recommended realignment actions. The outputs of the EIFS model are discussed herein in terms of changes (losses or gains) within the region where a realignment-associated installation is located.

Impacts (regional losses or gains) associated directly with alignment actions are considered to be primary impacts. Primary impacts include the changes in the following parameters: personnel employed at the installation, their salaries, procurement, and the initial expenditures of realignment-associated construction. Secondary impacts are those effects induced by the initial (primary) impact; for example, a decrease (change) in the regional

demand for goods and services that is associated with a regional decrease (change) in the number of persons earning wages and salaries. In this case, the change (decrease) in demand is the secondary impact that was induced by the primary impact which is the change (decrease) in the number of actual or potential purchasers (persons earnings wages and salaries). Total impacts for a region include all of the primary and secondary impacts within that region. A detailed discussion of the EIFS model follows in this appendix. A listing of all of the outputs of the EIFS model is provided in Tables II through IV.

- (1) **Realignment Economic Impacts** The realignment actions will result in a decrease (loss) in the sales volume for regional merchants of \$200.2 million. The primary and secondary impacts will result in a 1,702 person-year decrease in regional employment, and a \$37.9 million decrease in regional income.
- (2) **Construction Economic Impacts** Because there is no realignment-related construction, there will be no associated impacts.
- (3) **One-Time Expenditure Economic Impacts²** All one-time expenditure impacts will occur during the construction period of 1991 through 1994. The total primary and secondary impacts of realignment-associated one-expenditures will result in the regional sales volume increasing by \$2.8 million, regional employment increasing by 18 person-years, and regional personal income increasing by \$296.0 thousand.
- (4) **Military Student and Trainee Economic Impacts** Because there are no affected military students or trainees, there will be no associated impacts.

²The impacts of one-time expenditures are analyzed on an annual-average basis, starting FY 1991 through the completion of the subject BRACO action. For example, a BRACO action commencing FY 1991 and ending in FY 1994 will have one-time expenditures occurring over a four-year period. Not knowing the actual temporal pattern of these expenditures, the SEA Team assumed that they would occur on an annual-average basis.

- (5) **Second Jobs and Working Dependents Economic Impacts**³ The total primary and secondary impacts of the change in the number of personnel holding second jobs and working dependents will result in decreasing regional sales volume by \$10.4 million, decreasing regional employment by 322 person-years, and decreasing regional personal income by \$4.6 million.
- (6) **Summary of the Socioeconomic Impacts** During the realignment period, all actions at Fort Monmouth are expected to decrease regional sales volume by \$197.4 million, decrease regional employment by 1,684 person-years, and decrease regional income by \$37.7 million. A net total of 405 employees (331 civilians and 74 military) will leave the Fort Monmouth area as a result of the Huachuca/Devens realignment. The actions at Fort Monmouth are expected to result in a 1,141-person decrease in regional population. The total decrease in regional population will include a decrease in persons living off-post of 983 and a decrease in children attending public schools of 227, some of whom also live off-post. In addition, there will be a 341-unit decrease in the total number of occupied housing units within the region (110 owner-occupied units and 231 renter-occupied units).

After the realignment period, all actions at Fort Monmouth are expected to decrease regional sales volume by \$200.2 million, decrease regional employment by 1,702 person-years, and decrease regional income by \$38.0 million. A net total of 405 employees (331 civilians and 74 military) will leave the Fort Monmouth area as a result of the Huachuca/Devens realignment. The actions at Fort Monmouth are expected to result in a 1,141-person decrease in regional population. The total decrease in regional population will include a decrease in persons living off-post of 983 and a decrease in children attending public schools of 227, some of whom also live off-post. In addition, there will be a 341-unit decrease in the total number of occupied housing units within the region (110 owner-occupied units and 231 renter-occupied units).

³ The SEA Team has opted to not include these impacts with the total regional impacts of this action because their inclusion is considered to be technically and conceptually open to question. While personnel holding second jobs and their working dependents are acknowledged to generate economic effects that are an additional dimension of this impact analysis, the exclusion of such impacts is predicated on the assumption that the affected workers either hold positions that are already part of the estimated secondary impacts attributable to the BRACO action or are employed by firms in which production decisions contingent upon sources of demand that are not associated with the BRACO action (i.e., it is assumed that these affected workers will be replaced if they leave their positions). Consequently, the SEA Team estimates and shows these impacts in a separate table. If the preparers of the relevant Environmental Impact Statements (EISs) deem that these impacts should be included with the total regional socioeconomic impacts of the BRACO action, they may do by simply adding these impacts to the total impacts estimated by the SEA Team.

4. SIGNIFICANCE OF REALIGNMENT OF FORT MONMOUTH

The significance of these impacts may be evaluated by a variety of criteria. Significance in this analysis is viewed in terms of the overall change in regional conditions. Significance is also determined by gauging the economic resiliency of a region in terms of threshold values representing the maximum of historic variation (the Rational Threshold Value method) and by evaluating the "normal" fluctuations experienced by the region (the Forecast Significance of Impacts procedure). These methods compare the impacts of a proposed action to the historic fluctuations experienced by the region. The details of those methods and a table exhibiting criteria for the testing of significance are found in Appendix II, while the information used to evaluate the significance of the impacts are found in Tables V and VI.

The expected changes in regional sales volume, employment, income, and population within the Fort Monmouth area represent 0.4%, 0.2%, 0.09%, and 0.05% of their 1987 levels, respectively. Based on the analyses of all actions during the realignment period at Fort Monmouth, the SEA Team concludes that the attendant socioeconomic effects of those actions ARE NOT significant.⁴

The expected changes in regional sales volume, employment, income, and population within the Fort Monmouth area represent 0.7%, 0.2%, 0.09%, and 0.05% of their 1987 levels, respectively. Based on the analyses of all actions after the realignment period at Fort Monmouth, the SEA Team concludes that the attendant socioeconomic effects of those actions ARE NOT significant.⁵

5. RELATED ACTIONS AT OTHER INSTALLATIONS

The Realignment of Fort Monmouth will necessitate changes in personnel at Forts Huachuca and Devens.

⁴ The expected changes in regional sales volume, employment income, and population do not exceed either the RTV or the FSI criteria for significance.

⁵ The expected changes in regional sales volume, employment income, and population do not exceed either the RTV or the FSI criteria for significance.

TABLE I

MAJOR PERSONNEL CHANGES AT INSTALLATIONS AFFECTED BY REALIGNMENT OF FORTS HUACHUCA, DEVENS, AND MONMOUTH

REVISED: 19 APRIL 1990

	FORT HUACHUCA (subtractions)	FORT HUACHUCA (additions)	FORT DEVENS (subtractions)	FORT DEVENS * (additions)	FORT MONMOUTH (subtractions)	
EXPENDITURE CHANGES	(\$40,500)	\$16,300	(\$3,435)	\$82,500	(\$37,600)	
CIVILIAN PERSONNEL Number	-1475	265	-318	2131	-331	
Wages & Salaries	\$41,630	\$31,794	\$31,794	\$42,742	\$43,014	
MILITARY PERSONNEL Number	-788	1098	-1284	930	-74	
Wages & Salaries	\$26,297	\$22,159	\$22,159	\$28,964	\$31,294	
% On-Post	28%	20%	67%	95%	86%	
BRACO CONSTRUCTION	\$0	\$32,300	\$0	\$20,000	\$0	
ONE-TIME EXPENDITURES	\$0	\$6,412	\$0	\$25,250	\$675	
MILITARY STUDENTS Number	0	0	0	0	0	
Wages & Salaries	\$0	\$0	\$0	\$0	\$0	
% On-Post	0%	0%	0%	0%	0%	
MILITARY TRAINEES Number	0	-1674	-1674	0	0	
Wages & Salaries	\$0	\$10,733	\$10,733	\$0	\$0	
% On-Post	0%	90%	90%	0%	0%	
TOTAL OTHER JOBS Number	-1333	643	-757	1837	-256	
Wages & Salaries	\$13,242	\$12,275	\$12,286	\$13,315	\$13,503	

NOTE: All amounts of money, except wages and salaries, are in thousands of dollars. Wages and salaries are means expressed in dollars. "Total Other Jobs" is applicable to civilian and military personnel and their resident family members.

SOURCE: Data supplied by the Major Commands responsible for the affected installations. N.A. means not available.

* Includes 347 civilian and 79 military positions from Fort Belvoir as shown on Figure 2.2-1 (main text) and described in Section 4.3.2.2 (main text).

NOTE: Dollar amounts are annualized for the BRAC realignment and construction period (1990-1994).

TABLE II
ECONOMIC IMPACT FORECAST SYSTEM
ISMA ACTIVITY LEAVE FORT MONMOUTH
REALIGNMENT IMPACTS

COUNTY LIST:	#	FIPS#	County
	=	=====	=====
	1	34023	middlesex, nj
	2	34025	monmouth, nj
	3	34029	ocean, nj
	4	34039	union, nj

INPUT PARAMETERS

Deflators: (EIFS default deflators were used)
 (price deflator for baseline year (ex b.v.)): 100.00
 (price deflator for output (ex b.v.)): 122.60
 (price deflator for baseline year (BV)): 100.00
 (price deflator for output (BV)): 112.20
 Change in expenditures for local services and supplies: \$-37,600,000
 (price deflator): 112.20
 Change in civilian employment: -331.00
 Average income of affected civilian personnel: \$43,014
 (price deflator): 122.60
 Percent of affected civilian personnel expected to relocate: 100.0%
 Change in military employment: -74.00
 Average income of affected military personnel: \$31,294
 (price deflator): 122.60
 Percent of affected military living on-post: 86.00%

STANDARD EIFS MODEL FORECAST: ISC Realignment Impact at Ft Monmouth

Export income multiplier:	4.1084	
Change in local		
Sales volume	Direct:	-\$48,724,000
	Induced:	-\$151,453,000
	Total:	-\$200,177,000 (-0.379%)
Employment	Direct:	-316
	Total:	-1,702 (-0.182%)
Income	Direct:	-\$5,208,000
	Total (place of work):	-\$37,950,000
	Total (place of residence):	-\$37,950,000 (-0.109%)
Local population		-1,141 (-0.058%)
Local off-base population		-983
Number of school children		-227
Demand for housing	Rental:	-110
	Owner occupied:	-231
Civilian employees expected to relocate:		-331
Military employees expected to relocate:		-74

TABLE III
ECONOMIC IMPACT FORECAST SYSTEM
ISMA ACTIVITY LEAVE FORT MONMOUTH
ONE-TIME EXPENDITURE IMPACTS

COUNTY LIST: # FIPS# County
 = =====
 1 34023 middlesex, nj
 2 34025 monmouth, nj
 3 34029 ocean, nj
 4 34039 union, nj

INPUT PARAMETERS

Deflators: (EIFS default deflators were used)
 (price deflator for baseline year (ex b.v.)): 100.00
 (price deflator for output (ex b.v.)): 122.60
 (price deflator for baseline year (BV)): 100.00
 (price deflator for output (BV)): 112.20
 Change in expenditures for local services and supplies: \$675,000
 (price deflator): 112.20
 Change in civilian employment: 0.00
 Average income of affected civilian personnel: \$0
 (price deflator): 122.60
 Percent of affected civilian personnel expected to relocate: 0.0%
 Change in military employment: 0.00
 Average income of affected military personnel: \$0
 (price deflator): 122.60
 Percent of affected military living on-post: 0.00%

STANDARD EIFS MODEL FORECAST: One-Time Expenditure Impact at Ft Monmouth

Export income multiplier:	4.1084	
Change in local		
Sales volume	Direct:	\$675,000
	Induced:	\$2,098,000
	Total:	\$2,773,000 (0.005%)
Employment	Direct:	4
	Total:	18 (0.002%)
Income	Direct:	\$72,000
	Total (place of work):	\$296,000
	Total (place of residence):	\$296,000 (0.001%)
Local population		0 (0.000%)
Local off-base population		0
Number of school children		0
Demand for housing	Rental:	0
	Owner occupied:	0
Civilian employees expected to relocate:		0
Military employees expected to relocate:		0

TABLE IV
ECONOMIC IMPACT FORECAST SYSTEM
ISMA ACTIVITY LEAVE FORT MONMOUTH
SECOND JOB AND WORKING DEPENDENT IMPACTS

COUNTY LIST:	#	FIPS#	County
	=	=====	=====
	1	34023	middlesex, nj
	2	34025	monmouth, nj
	3	34029	ocean, nj
	4	34039	union, nj

INPUT PARAMETERS

Deflators: (EIFS default deflators were used)
 (price deflator for baseline year (ex b.v.)): 100.00
 (price deflator for output (ex b.v.)): 122.60
 (price deflator for baseline year (BV)): 100.00
 (price deflator for output (BV)): 112.20
 Change in expenditures for local services and supplies: \$0
 (price deflator): 112.20
 Change in civilian employment: -255.00
 Average income of affected civilian personnel: \$13,503
 (price deflator): 122.60
 Percent of affected civilian personnel expected to relocate: 100.0%
 Change in military employment: 0.00
 Average income of affected military personnel: \$0
 (price deflator): 122.60
 Percent of affected military living on-post: 0.00%

STANDARD EIFS MODEL FORECAST: ISC Realignment - Second Job & Working Dependent
Impact at Ft Monmouth

Export income multiplier:	4.1084	
Change in local		
Sales volume	Direct:	-\$2,534,000
	Induced:	-\$7,875,000
	Total:	-\$10,409,000 (-0.020%)
Employment	Direct:	-16
	Total:	-322 (-0.034%)
Income	Direct:	-\$271,000
	Total (place of work):	-\$4,556,000
	Total (place of residence):	-\$4,556,000 (-0.013%)
Local population		0 (0.000%)
Local off-base population		0
Number of school children		0
Demand for housing	Rental:	0
	Owner occupied:	0
Civilian employees expected to relocate:		0
Military employees expected to relocate:		0

APPENDIX D
PROGRAMMATIC AGREEMENT

PROGRAMMATIC AGREEMENT
AMONG
DEPARTMENT OF THE ARMY
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION, AND
THE NATIONAL CONFERENCE OF STATE HISTORIC PRESERVATION OFFICERS
CONCERNING
REALIGNMENT AND CLOSURE OF ARMY INSTALLATIONS
IN ACCORDANCE WITH
BASE CLOSURE AND REALIGNMENT ACT

WHEREAS, the Department of the Army (Army) is responsible for implementation of applicable portions of the Base Closure and Realignment Act of 1988 (P.L. 100-526), commonly known as the "BRAC" program; and

WHEREAS, the Army is proceeding with base realignment and closure actions, to include the realignment of functions and units, closure of installations, and disposal of surplus property in a manner consistent with the "Report of the Defense Secretary's Commission on Base Realignments and Closures," December 29, 1988 (Commission Report); and

WHEREAS, the Army has determined that its implementation of the BRAC program may have effects on properties included in and eligible for inclusion in the National Register of Historic Places (historic properties); and

WHEREAS, the Army has consulted with the Advisory Council on Historic Preservation (Council) and the National Conference of State Historic Preservation Officers (NCSHPO) pursuant to Section 800.13 of the regulations (36 CFR Part 800) implementing Sections 106 and 110(f) of the National Historic Preservation Act (NHPA) and Army Regulation 420-40, "Historic Preservation;"

NOW, THEREFORE, the Army, the Council, and the NCSHPO agree that the Army's implementation of the BRAC program shall be administered in accordance with the following stipulations, which will satisfy the Army's Section 106 and 110(f) responsibilities for all individual undertakings under the BRAC program.

Stipulations

The Army will ensure that the following measures are carried out.

I. Applicability

The terms of this Agreement are intended to apply to all Army installations which may be affected under the provisions of P.L. 100-526 (see Attachment 1), with the exception of the 52 Stand Alone Housing Sites that are variously located in

Connecticut, Illinois, Maryland, Massachusetts, Missouri, New Jersey, New York, Pennsylvania, Rhode Island, Virginia, Washington, and Wisconsin. Those sites will be the subjects of individual consultation between the Army and the appropriate State Historic Preservation Officer (SHPO) in accordance with Section 800.4 and 800.5 of 36 CFR Part 800.

II. Areas of Potential Effects

Although some BRAC activities may induce changes in population distribution, traffic, and land use that extend beyond the particular facilities to be closed and parcels on which new construction will occur, the effect of these changes on historic properties is uncertain and in most cases is expected to be minor. Accordingly, the area of potential effects (36 CFR 800.2[c]) of a BRAC action shall be understood to be the area of the facility to be closed and/or constructed, unless there is compelling evidence that effects are likely to occur in a broader area. In cases of dispute over the area of potential effects of a BRAC action, the opinion of the Council will be binding on all parties to this Agreement.

III. NEPA and Preliminary Coordination with the SHPO

A. It is mutually understood that many of the terms of this Agreement will be carried out after the Army has complied with the National Environmental Policy Act (NEPA) and filed its Record of Decision (ROD). Nevertheless:

1. whenever it is feasible for the Army to carry out the terms of this Agreement prior to filing the ROD, the Army will do so; and

2. whenever the Army files a ROD on a BRAC action for which the terms of this Agreement have not yet been fully implemented, the Army will stipulate in the ROD that the NHPA has not yet been complied with and that no action will be taken which would foreclose completion of the Army's responsibilities under the NHPA; and

3. the Army will ensure that no actions that could result in effects on historic properties are undertaken pursuant to a ROD until the terms of this Agreement have been carried out.

B. The Army will notify the appropriate SHPO at the earliest time possible of the nature and timing of the BRAC actions for individual installations and will provide the

following information:

1. a description of the type and location of the undertaking.
2. currently available milestones for BRAC actions affecting the installation.
3. information available about historic properties at the installation.

C. The Army will coordinate the NEPA process with its NHPA activities. In accordance with the memorandum to all BRAC participants dated July 12, 1989 (Attachment 2), NEPA documentation for each facility will:

1. identify known historic properties and past studies;
2. identify the potential for historic properties to be affected by the BRAC process; and
3. identify the steps necessary for the Army to meet its Section 106 responsibilities under NHPA.

D. The Army will invite comments from affected SHPOs on Environmental Assessments (EA) and Draft Environmental Impact Statements (DEIS).

E. The Army shall provide a copy of this Agreement, its attachments, AR 420-40, 36 CFR 800, and the materials listed in Stipulation IX of this Agreement to appropriate commanders.

IV. IDENTIFICATION AND EVALUATION

A. Identification

1. Based on the assembly of existing information through the NEPA process, the Army will consult with individual SHPOs and make a reasonable and good faith effort to identify historic properties located on installations under Army control that will be affected by BRAC.

2. When existing information is not adequate for identifying significant properties, the Army will undertake installation-specific field surveys in accordance with appropriate professional standards as defined in the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (48 FR 44716-42; hereafter "Standards and

Guidelines"), except as provided in Attachment 3.

3. The Army will develop priorities for undertaking identification and evaluation of historic properties on individual installations. These priorities will be determined by:

a. the specific nature and timing of the undertaking proposed;

b. the nature and extent of the individual Army installation and its land use history;

c. the potential nature and extent of historic properties; and

d. possible constraints on field investigations, such as ranges, impact and contaminated areas, safety zones and hazardous materials.

4. All identification and evaluation activities will be carried out in consultation with the appropriate SHPO. In addition, the Army and the SHPOs will assemble and exchange information as it becomes available on the location and evaluation of historic properties.

5. The Army will ensure the identification of records and objects related to the historic significance of properties to be disposed of. Each installation will be required to identify extant historic records and related historic objects.

6. Throughout the planning and implementation of the BRAC program, the Army will provide guidance to the field to ensure that historic properties are not inadvertently damaged, destroyed, or allowed to deteriorate.

B. Evaluation

The Army will determine the eligibility of properties for inclusion in the National Register in accordance with 36 CFR 800.4(c), and with reference to inventories and planning by the State, the Army's history and traditions, previous Army historic site surveys, and any thematic studies that may have been completed or are underway.

V. Determinations of Effect

A. The Army, in consultation with the appropriate SHPO, shall determine the effect of BRAC actions on historic properties in accordance with 36 CFR 800.5, applying the Criteria of Effect

and Adverse Effect at 36 CFR 800.9.

B. Where the Army determines pursuant to 36 CFR 800.5 that an adverse effect may occur, then:

1. if the Army determines, in consultation with the SHPO and taking into account the comments, if any, of the interested persons identified at 36 CFR 800.5(e)(1), that it is appropriate to apply the standard mitigation measures set forth in Attachment 4, the Army may provide the SHPO and the Council with sufficient documentation to support this determination, advise them that it intends to carry out the specified measures, and request their concurrence within 15 days. If the Council and the SHPO concur within 15 days of their receipt of such documentation, the Army shall carry out the standard mitigation measures it has determined to be appropriate. Failure by the Council or SHPO to respond within the specified time period shall be taken to evidence that party's concurrence. Should the Council or SHPO disagree with the Army's determination, the Army will undertake consultation in accordance with 36 CFR 800.5(e).

2. if the Army and the SHPO, taking into account the comments, if any, of the interested persons identified at 36 CFR 800.5(e)(1), agree on a program to avoid, minimize, or mitigate the adverse effect, the Army may provide the Council with sufficient documentation to support this determination and request its concurrence within 30 days. If the Council concurs within 30 days of its receipt of such documentation, the Army shall carry out the program. Failure by the Council to respond within the specified time period shall be taken to evidence the Council's concurrence. Should the Council object to the program, the Army will undertake consultation in accordance with 36 CFR 800.5(e).

3. if the Army determines that neither paragraph 1 nor paragraph 2 above is applicable, the Army will undertake consultation in accordance with 36 CFR 800.5(e).

VI. Treatment and Management.

A. The Army will ensure that the effects of BRAC actions on historic properties are treated in accordance with the determinations and agreements reached pursuant to Stipulation V.

B. For those installations or portions of installations which will remain under Army control, the Army will develop treatment and management plans to ensure that properties affected by BRAC are incorporated into installation Historic Preservation Plans (HPP) in accordance with AR 420-40, and shall create such

HPPs should they not presently exist. All such HPPs shall be developed or amended to include properties affected by BRAC within a reasonable period of time following the date of this Agreement, not to exceed the September 30, 1995 date for completion of BRAC actions as specified in P.L. 100-526.

C. For those installations of which the Army will dispose, the Army will work with the local re-use committees, appropriate SHPOs and other interested parties to develop treatments and/or management plans to ensure compatible reuse.

D. Notwithstanding any other provision of this Agreement, the Army may undertake documentation of historic structures in a manner consistent with the Secretary of the Interior's Standards and Guidelines for Architectural and Engineering Documentation (48 FR 44730-34) prior to making a determination or reaching an agreement pursuant to Stipulation V, if the Army judges that such documentation is likely to be part of a mitigation program that will subsequently be agreed to.

E. Notwithstanding any other provision of this Agreement, the Army may enter into agreements with SHPOs and the Council, seeking the concurrence of other interested persons, if any, establishing processes for the identification, evaluation, treatment and management of historic properties that may be subject to effect by a BRAC action, in lieu of identifying such properties and establishing specific treatment or management plans for them prior to making a decision regarding such an action, where:

1. the precise nature, schedule, location or design of the action is uncertain, and

2. the Army, SHPO, and Council agree that the effects of the action are likely to be relatively minor, or affect properties whose treatment or management will require the application of routine procedures.

VII. Interim Protection, Records Retention, and Long Term Curation

A. The Army will notify the appropriate commanders of the need for interim protection of identified and potential historic properties to ensure that deferred maintenance or other management decisions do not adversely effect the integrity of these properties. Important architectural elements will be identified to ensure future appropriate disposal.

B. The Army will consult with the SHPO on terms of curation

and disposition of historical documents, drawings, photographs, reports, and archeological materials generated by BRAC studies.

VIII. Public Involvement

A. The Army will ensure that the activities of the local re-use committees will be coordinated, as appropriate, with activities carried out under this Agreement.

B. The Army and the appropriate SHPO will consider the need for additional consulting parties consistent with the Council's publication, "Public Participation in Section 106 Review: A Guide for Agency Officials" (Advisory Council on Historic Preservation, 1989).

C. To the extent possible, public participation shall be coordinated with public participation under NEPA.

IX. Standards and Guidelines

Standards and guidelines for implementing this Agreement include, but are not limited to:

Army Regulation (AR) 420-40: Historic Preservation
(Department of the Army, 15 May 1984);

36 CFR Part 800: Protection of Historic Properties;

The Section 110 Guidelines: Guidelines for Federal
Agency Responsibilities under Sec. 110 of the National
Historic Preservation Act (53 FR 4727-4746);

The Secretary of the Interior's Standards and
Guidelines for Archeology and Historic Preservation (48
FR 44716-42);

The Secretary of the Interior's Standards for
Rehabilitation and Guidelines for Rehabilitating
Historic Buildings (National Park Service, 1983);

Identification of Historic Properties: a Decisionmaking
Guide for Managers (Advisory Council on Historic
Preservation, 1988);

Public Participation in Section 106 Review: A Guide for
Agency Officials (Advisory Council on Historic
Preservation, 1989); and

Preparing Agreement Documents (Advisory Council on
Historic Preservation, 1989).

X. Dispute Resolution

A. Should a SHPO or an interested person identified at 36 CFR 800.5(e)(1) object to the Army's implementation of any part of this Agreement, the Army shall consult with the objecting party to resolve the objection. If the Army determines that the objection cannot be resolved, the Army shall forward all documentation relevant to the dispute to the Council. Within 30 days after receipt of all pertinent documentation, the Council will either:

1. provide the Army with recommendations, which the Army will take into account in reaching a final decision regarding the dispute; or

2. notify the Army that it will comment pursuant to 36 CFR 800.6(b), and proceed to comment. Any Council comment provided in response to such a request will be taken into account by the Army in accordance with 36 CFR 800.6(c)(2) with reference to the subject of the dispute.

B. Any recommendation or comment provided by the Council will be understood to pertain only to the subject of the dispute; the Army's responsibility to carry out all actions under this Agreement that are not the subject of the dispute will remain unchanged.

C. Should a member of the public object to any measure carried out under the terms of this Agreement, or the manner in which such a measure is implemented, the Army shall take the objection into account and consult as needed with the objecting party, the SHPO, and the Council to resolve the objection.

XI. Amendments

Any party to this Agreement who determines that some portion of the Agreement cannot be met must immediately request the other signatories to consider an amendment or addendum to this Agreement which would ensure full compliance. Such an amendment or addendum shall be executed in the same manner as the original Agreement. Should any party to this Agreement be unable to maintain a level of effort sufficient to carry out the terms of

this Agreement, that party shall notify the others and seek an appropriate amendment.

Execution and implementation of this Programmatic Agreement evidences that the Army has satisfied its responsibilities under Sections 106 and 110(f) of the National Historic Preservation Act for all individual undertakings of the program.

DEPARTMENT OF THE ARMY

BY: Paul W. Johnson (date) 5 FEB. 1990
Paul W. Johnson, Deputy Assistant Secretary of the Army
(Installations and Housing)

NATIONAL CONFERENCE OF STATE HISTORIC PRESERVATION OFFICERS

BY: F. Lawrence Oaks (date) 2-5-90
F. Lawrence Oaks, President

ADVISORY COUNCIL ON HISTORIC PRESERVATION

BY: John F. W. Rogers (date) Feb. 5, 1990
John F. W. Rogers, Chairman

ATTACHMENT 3

EXCEPTIONS TO IDENTIFICATION PROCEDURES

Where existing information is not adequate for identifying historic properties, the Army nonetheless need not undertake installation-specific field surveys pursuant to Stipulation IV.A.2 if:

a. the lands involved will be transferred to another Federal agency that will use them for purposes no more likely to adversely affect historic properties than those for which the lands are presently used by the Army, provided the recipient Federal agency agrees to develop and implement a program, in consultation with the SHPO and other interested persons, for carrying out the requirements of Section 110(a)(2) of the National Historic Preservation Act on the lands it receives; or

b. the lands involved will be transferred to a State or local agency that enters into an agreement with the Army, the SHPO, and the Council stipulating that it will use them for purposes likely to have no adverse effect on historic properties which may be present, and that it will develop and implement a program, in consultation with the SHPO, the Council, and other interested persons, for identifying and protecting historic properties in a manner consistent with the "Standards and Guidelines" and other applicable Department of the Interior and Council guidelines: or

c. the BRAC action that will affect the lands involved, and the nature of the historic properties that may exist on such lands, are such that the Army, the SHPO, the Council, and other interested persons agree that identification need not be carried out, or may be carried out at a later date, and enter into an agreement stipulating how and by whom any identification will be carried out.

ATTACHMENT 4

STANDARD MITIGATION MEASURES

1. Transfer of a historic building or structure subject to a preservation covenant, enforceable under applicable State law, equivalent to the example shown in Figure 7 of the Council's 1989 publication: "Preparing Agreement Documents" (pp. 30-31), combined with a program of recordation approved by the SHPO as consistent with the Secretary of the Interior's Standards and Guidelines for Architectural and Engineering Documentation (48 FR 44730-34).

2. Recovery of data from an archeological site or sites in accordance with a research design and data recovery plan prepared in consultation with the SHPO and interested persons (including any interested Indian tribe or other Native American group) and addressing each of the following points:

- the property, properties, or portions of properties where data recovery is to be carried out;

- any property, properties, or portions of properties that will be altered or transferred without data recovery;

- the research questions to be addressed through the data recovery, and the importance and relevance of each;

- the methods to be used, and their relevance to the research questions;

- the methods to be used in analysis, data management, and dissemination of data, including a schedule;

- the disposition of recovered materials and records;

- the methods for involving the interested public in the data recovery;

- the methods for disseminating results of the work to the interested public;

- the methods by which local governments, Indian tribes, and other interested persons will be kept informed of the work and afforded the opportunity to comment; and

- the methods and schedule by which progress and final reports will be provided to the SHPO, the Council, and interested persons.